JUL 31 1959

NATIONAL FISHERMAN

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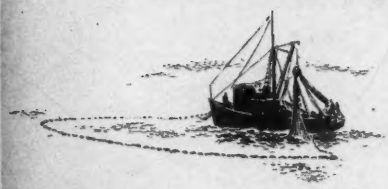
The COLUMBIAN Line



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ENGINEER'S FIELD REPORT

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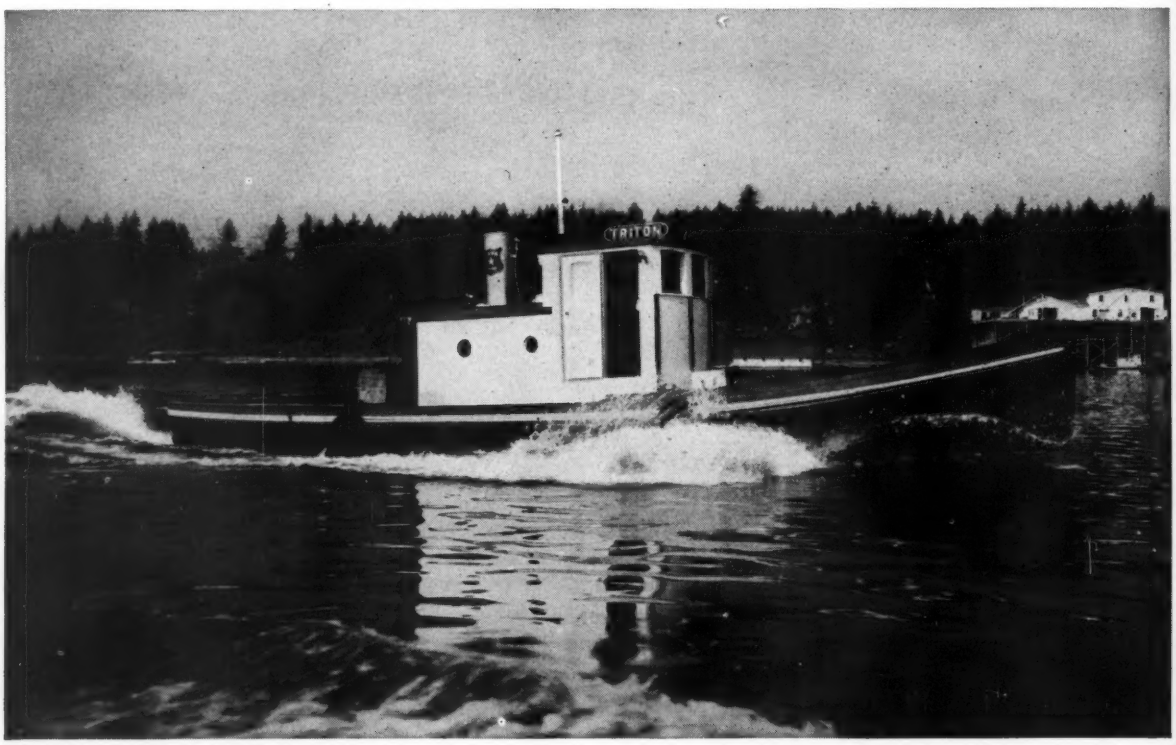
21,600 hours on RPM DELO OIL before overhaul



Operating at top speed 90% of time, MV Triton (above) ran 9 years on RPM DELO Oil for Columbia River Packers Association, Vancouver, Wash., before overhaul. One of three pickup boats in operation, this 48-footer collects from 12 to 16 tons of fish per trip from fishing boats for delivery to Ellsworth Station. 160 h.p. Graymarine engine, overhauled in 1956 after 21,600 hours, had no carbon, lacquer deposits or stuck rings, and no rust despite fact Triton had sunk seven times in service.

Station Mechanic and Launchman George Lane reports: "RPM DELO Oil has never let us down. It keeps our engines in top running condition with no corrosion or sludging problem. That's important because, when the fleet is working, the catch must be collected by these boats as fast as possible. Any poor engine performance or breakdown could cause the catch to spoil on the way to the cannery."

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The Lookout

Coordinating Development

Recently addressing the annual convention of the Outdoor Writers Association of America, Donald L. McKernan, director, Bureau of Commercial Fisheries, expressed concern over the extent of uncoordinated development in coastal areas. He went on to consider why this situation exists, and how it might be relieved.

The coastline competes closely with land resources, as the most important factor contributing to the Nation's prosperity. Three-fourths of the country's people live along the coast. Industries tend to spring up along waterways and coastlines. Over 500,000 people, harvesting 5 billion pounds of protein foods from ocean and coastal waters, are completely dependent on the coastline areas.

With multiple uses of coastal areas growing faster than the 1.8 percent yearly population increase, every effort must be made to plan for comprehensive development. Because natural resources can be damaged by hit or miss expansion, coordinated development is necessary. This means compromise—using the next best plan, if the first causes one user to give up an economically profitable enterprise.

Neither states nor federal Government have adequate facilities or time to protect these natural resources. They also lack fundamental knowledge about the effect of changes.

While the Corps of Engineers river and harbor funds for 1959 was 717 million dollars, the Interior Department's river basin budget was 2 million, or three-tenths of one percent. One-tenth of one percent is spent on research and surveys. Present research must be doubled and tripled, or development of physical projects affecting coastal environment must be slowed down.

Needed is a nationwide policy with respect to development and use of coastal regions and waters. But, such a policy, accepted and followed by all concerned, can not overcome the lack of adequate knowledge. With out this knowledge, multiple project planners are powerless to implement coordinated planning and development.

The first job, then, is to assemble available knowledge and acquire more, about the effects of physical alterations to coastal resources. With such knowledge, coordinated planning will insure the perpetuation of fish and wildlife resources dependent upon coastal environment.

NATIONAL FISHERMAN

The Fishing Industry Magazine

Vol. 40 No. 6 July 1959

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FISHERY PROGRESS

► First Quarter Exports Gain

First quarter trends for 1959 show gains in U. S. exports of canned sardines and canned salmon, according to Fish and Wildlife reports.

Exports of canned sardines were about four times those of the first quarter of 1958. The increase was due to an improved pilchard catch in 1958, making larger supplies of California sardines available for export.

During the first three months of 1959 canned salmon exports were nine times those of the like period of 1958. Reason for the increase was exceptionally large shipments, totaling 2,131,579 pounds, going to the Philippines in March.

Gains in U. S. imports of groundfish and ocean perch fillets, tuna, shrimp, scallops, and fishmeal were also reported.

► New Fleet Additions

During the first four months of 1959, a total of 130 vessels of 5 net tons or over received first documents as fishing craft. This is 78 less than reported during the same period last year. Most of the decline occurred in the Gulf which represented a drop of 50 vessels from the year before. The Gulf led, however, in new vessels with 40.

Forty-five vessels received first documents in April 1959, or 14 less than April 1958. The Gulf led in new boats with 15, followed by the Pacific with 13. The Chesapeake area had 9, the south Atlantic had 5, Alaska 2, with New England trailed with one new vessel.

► Price Index May 1959

Wholesale prices from April to May, 1959, showed no significant change overall. Prices for fresh salt water fish were higher in most instances, while processed frozen fishery products prices were lower. Demand was good, but catches were light for that time of year.

The May 1959 edible fish and shellfish wholesale index (121.7 percent of the 1947-48 average) was .8 percent less than the previous month and 5.4 percent lower than the same month in 1958.

► May Groundfish Imports Up

During May 1959, imports of groundfish and oceanperch fillets and blocks amounted to 13.9 million pounds. This represented an increase of 2.9 million pounds compared with the same month last year, according to data published by the Bureau of Commercial Fisheries.

► Arkansas Fish Farm Research

The purchase of two tracts of land in two important Arkansas rice, soybean, and cotton growing areas for the development of a fish farming research station has been announced by the Department of the Interior. The land acquired for the project totals 296 acres.

The purpose of the research is to provide practical ways by which fish farming can be conducted profitably in conjunction with agricultural crop growing.

The University of Arkansas has long been interested in finding income crops for rotation with rice production. Experience in recent years indicates that fish may be such a crop.

Construction of facilities and development of the land and initial staffing will proceed as soon as appropriations are made. A plan of operation has been made with the assistance of Dr. S. W. Ling, fishery expert with the U. N. Food and Agriculture Organization.

Biologists have, in the past, provided technical and extension services and consultation to farmers and the general public on pond and reservoir construction, stocking, and management.

► Shellfish Import Regulation

A bill providing for investigations and studies by the U. S. Surgeon General, of sanitation control maintained by foreign countries relating to the harvesting and preparation of shellfish has been referred to the Committee on Interstate and Foreign Commerce.

The purpose of the bill is to determine whether such controls meet the minimum standards prescribed for shellfish shipped in Interstate commerce in the U. S.

The Surgeon General would promulgate regulations establishing procedures relating to sanitary control. He would also make available names of foreign countries which comply with the prescribed standards.

► Bonneville Reorganization Act

A draft of proposed legislation entitled "A bill to amend the Bonneville Project Act, as amended" has been transmitted to the Under Secretary of the Interior by both Houses of Congress. The proposed reorganization would provide that the Bonneville Power Corp. would coordinate its programs with fish and wildlife preservation and propagation.

► 1958 Fish Oil Production Up

The 1958 production of fish oil mounted to 22 million gallons compared with 20.1 million gallons during 1957. An increase in the production of oil from menhaden (up 1.3 million gallons) accounted for the gain.

The greatest volume produced in a single month was in August at 4.1 million gallons, according to Fish and Wildlife reports.

The 1958 production of fish mea[1] and scrap amounted to over 226,000 tons, according to recent figures. This was a decline of 14,000 tons from the 1957 total.

► Military Closures

A joint resolution presented by the Legislative Assembly of California calls for protection of fishing rights relative to military closures.

It urges that Congress and the Secretary of Defense be requested to take necessary steps insuring a public hearing prior to closure of any area to fishermen by military authorities. The exception would occur in matters of extreme urgency.

All such closures would be limited to those areas and times vital to the national defense, with reasons made public when compatible with security restrictions.

► Protests Wage Increase

The proposed increase of the one dollar an hour minimum wage to $1.25 under the Fair Labor Standards Act was protested to a labor Senate subcommittee by Benjamin O. Johnson, representing the National Fisheries Institute.

Johnson felt the change could hurt small businesses, which work on a small margin of profit. He objected to removing present exemptions of fisheries under the Act.

He said the bill extends the Fair Labor Standards Act by drastically changing the definite scope of interstate commerce subject to the act.

► Gain in Cold Storage Holdings

Freezings and holdings of fishery products on May 31, 1959 were approximately 160,265,000 pounds compared to a total of 113,827,000 pounds in 1958. Higher holdings were mostly in cod, haddock, and ocean perch fillets and steaks; total salmon holdings increased nearly three times, while tuna more than doubled.

Holdings for May 1959 showed an increase of 1,999,000 pounds over the corresponding month of the previous year, according to preliminary reports, for a total of 32,724,000 pounds. Gains were evident in whiting, chubs, oyster and scallop meats, and lower holdings were found in halibut, ocean perch, and crabs.

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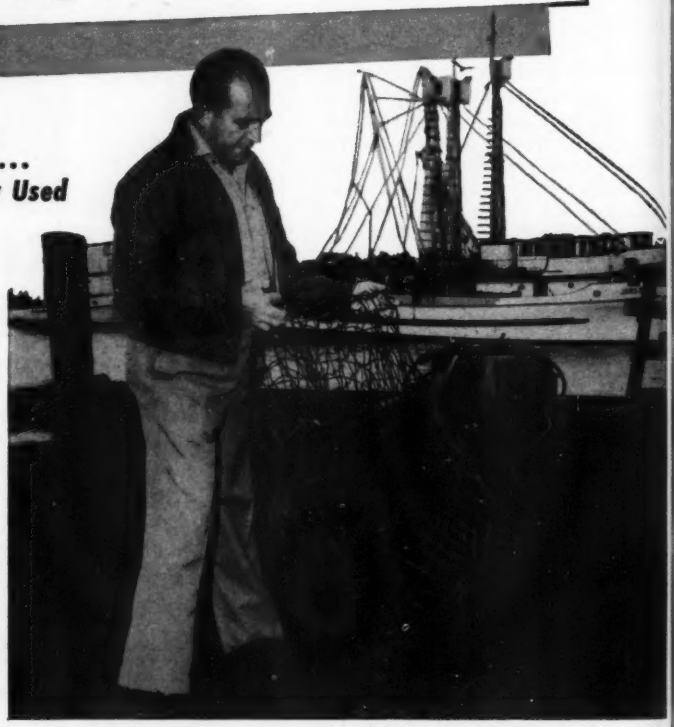

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TUNA CLIPPER STUDY SHOWS

Relation of Human Failure to Boat Losses

THE record of losses at sea shows the force of nature is no more responsible than the failings of the crews. Thirty-seven percent of losses are caused by human failure, seven percent by physical failure, and fifty six percent by a combination of both.

Many feel that training programs must be established to give seagoing personnel the knowledge and experience required to prevent accidents. The physical and moral responsibility are undeniably the burden of the boat owners. Where personnel and equipment are not insured, a single accident can result in financial failure.

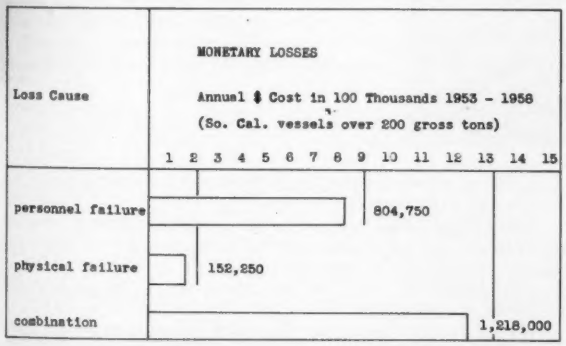
Because of the frequency and financial severity of accidents, insurance premiums are at a high level and may seem an overburdening load to the men who pay them. Risks are unavoidable, but injuries, loss of life, and damage or loss of equipment can be kept to a minimum. This is done through safety practices and the full cooperation of the crews.

Prevention of accidents is the personal problem of each individual. But, responsibility rests with the leaders. They must have the foresight and will to plan, and put into effect, a strong accident prevention program based on technical details, experience, honesty, and common sense.

In the last six years, twenty nine California tuna clippers of more than 200 gross tons have been lost, resulting in a financial setback of $13,050,000. This does not consider the loss of earnings.

At insured value, the twenty nine California losses resulted in a financial loss of $7,595,000 to the industry and/or the insurance underwriters. This is a yearly average of $1,265,833. The industry has also suffered the difference in the amount recovered from underwriters and the cost of new equipment. This is estimated at $5,455,000 or $188,103 per owner. The total combined loss is $13,050,000.

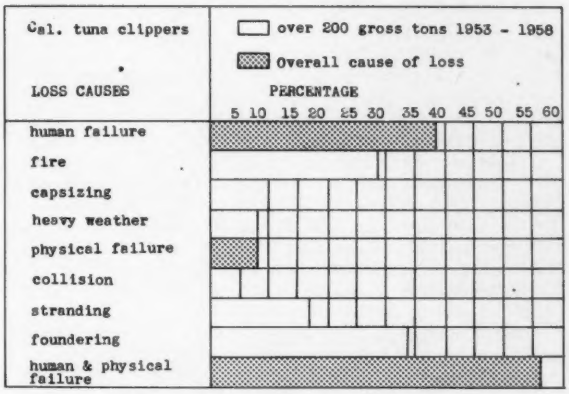
The vessels were lost despite the fact they were operated in ocean waters almost totally free of serious storm hazard. Fire, foundering, and stranding comprise the most serious loss group. Every accident must be considered not



only as a result important in itself, but as a symptom of faulty condition. The results of such a study will form the basis for a sound accident prevention plan.

One of two identical steel tuna clippers capsized and sank suddenly during her maiden voyage. The other made one trip, after which a false keel was installed containing ballast to add to stability. She operated successfully for several years before sinking.

The first boat capsized in a calm sea before any fish had been stowed in the freezing wells. Fuel oil was being transferred from a combination fuel and freezing well to the fixed fuel tanks. The loss was caused by filling this well without ballasting, as specified by written instruc-



tions. Apparently, the captain felt that his past experience made referring to the technical instructions for the ship's safety unnecessary.

While cruising in calm waters, with only a low flat swell running, the second vessel took a hard port list, which gradually became worse. Suddenly, she trimmed by the bow and disappeared. This was thought by the owners to be the result of failure of a recent hull repair. Technicians thought the list due to internal shifting of weights, caused by a structural failure.

To establish the facts, a model was built and tested, revealing a trim condition affecting stability not previously recognized in the clipper class. During the study, it was determined that exterior hull and deck openings, vital to security, were open when the vessel's initial list occurred. Had these openings been closed, as required by instructions to the master, the vessel would not have been lost.

The hull openings were not the reason for the list. A bait well bulkhead below deck and/or its attaching water supply lines had broken due to poor maintenance. Approximately thirty tons of water emptied into the shaft alley bilges. This started the list, which submerged two of the hull openings.

A study of this kind is sometimes costly when considered in relation to a particular incident. When it results in knowledge useful in forestalling other incidents, the cost is justified.

A third loss concerned a typical tuna clipper, carrying a crew of fifteen. She was lost within sight of her home port, to which she was returning in ballast, after discharging cargo elsewhere. She suddenly took a hard port turn, causing her to heel heavily to starboard. The captain stated that sea water entered through open engine room portholes and through deck hatches and doors, which, by instructions for maintaining stability, must be closed when under way. She continued to turn, capsized, and sank.

In an attempt to uncover the cause, astounding facts came to light. Stability instructions required that four fish freezing wells below the weather decks be maintained at capacity flooding with sea water ballast, fish, or fuel at all times when under way and maneuvering.

The master stated that his wells had been leaking for some time. In approximately seven to eight hours, the head water in the tank would drop ten to twelve inches below the top of the well. This established a free surface effect of the water in the tanks. Displaced caulking and deteriorated bulkhead structure were responsible for the leak.

It was also stated that during the trip, bilge pumps were not kept in operation and circulating pumps, normally

(*Continued on page 47*)

* Taken from material prepared by Wm. C. Miller, naval architect and marine engineer, Wm. C. Miller and Associates, San Diego, Cal., and presented at the 2nd World Fishing Boat Congress, Rome, Italy.

Design of Gillnet Boats on the Great Lakes

THE Great Lakes gillnetter, with its distinctive and extensive superstructure covering the full length of the hull, is the result of coping with climatic conditions on the Lakes. Present boats have progressed and been refined from early wooden tug designs, with the majority of new construction being steel.

Besides fishing properties, the vessels must also possess the capabilities of an icebreaker for winter operations. Engines are high or low-speed Diesels, replacing the steam and gasoline engines which were once popular.

Gillnetters were designed to fish trout, perch, chub, whitefish, smelt, salmon, herring and other fresh water species. The craft range in size from 33 to 60 feet, but the most common size is about 45 feet long. They usually have two-man crews.

As there are relatively few days during winter when the temperature is above freezing, the interior of the vessel is heated by a coal or oil burning stove. This prevents the nets from freezing and keeps them dry prior to setting, as well as keeping the fishermen warm.

The Steel Hull and its Advantages

With the depletion of shipbuilding timber and the increase in costs, the introduction of the steel gillnetter was inevitable. The early steel vessels followed closely the shape of the wooden tugboat hull. It was soon found that these hulls were, in many cases, as heavy if not heavier than their wooden counterparts.

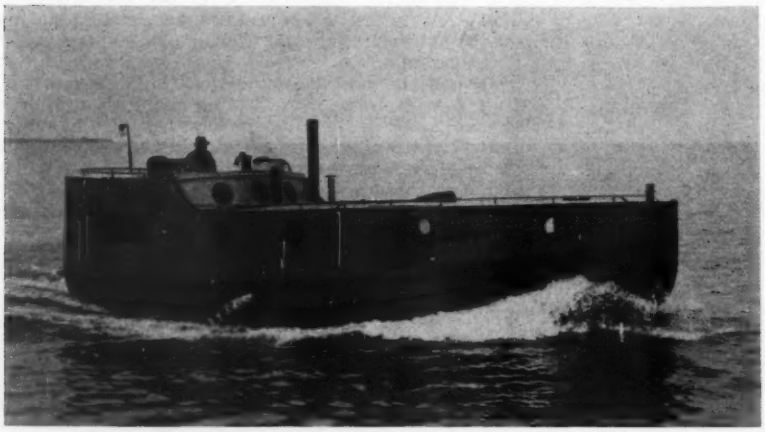
Aluminium alloys for gillnetter construction on the Lakes is not warranted at the present time. It is too costly and the corrosion rate of fresh water vessels is very small. Lighter weight, by itself, is of no importance. In fact, the greater weight of a steel gillnetter is an advantage as an ice breaker.

There has been a tendency to copy the yacht hull form up to the sheer line in both round and V-bottom hulls. While plate development reduces the cost of labor in plating, the extreme to which it is occasionally carried increases the cost of framing. It also requires more horsepower than is installed to achieve maximum hull efficiency. Unless the desired speed is in excess of 15 knots, there is little gained by carrying the plate development to the transom.

Deck Arrangements

The superstructure of the Great Lakes gillnetter varies according to the preference of the fisherman, builder, or designer. The stern, from which nets are always set, can open the entire width of the hull. Large double doors on the sides of the superstructure aft are for loading and unloading the nets in dock.

The smaller boats all have a raised deck aft, which is the steering and net-setting flat. It is seldom less than eight or ten feet in length fore and aft. All the boats, regardless of size, have the double doors on the sides aft. Personal preference dictates their width and the manner in which they swing. Some open vertically, while others open horizontally.



Great Lakes fishing tug "Joel" is powered by P & H 487C marine Diesel rated 82 hp. The 40' gillnetter has 3:1 Twin Disc hydraulic clutch and front power take-off to operate Crossley netlifter. She is operated by Herman J. and Warren H. Freitag out of Kenosha, Wisc.

The use of the long superstructure in steel construction caused a stability problem. It was impossible to build a light structure, which could be walked on without extensive framing. Doing so increased the cost out of proportion. To counteract the effects of the increased weight and the raising of the center of gravity, the vessels were heavily ballasted. Some of the newer hulls began to increase beam and at the same time decrease total displacement, partly offsetting the superstructure weight.

As propulsion plants became lighter, hulls became wider. The V-bottom was introduced to further reduce the initial cost of the gillnetter. This change came after welding was in general use.

Most new gillnetters are steel. The steel hull is easier to maintain, does not leak, and can be worked through the ice fields with little or no danger of puncturing or opening up. The Great Lakes, on the whole, are surrounded by metal working plants, and metal-working skill is common. The result is, numerous small plants have the necessary equipment and supply of skilled metal workers available so that they can economically build boats as a full-time or part-time business.

Advantages of horizontal hinging are that there is better control of the open area and it is reasonably watertight when running on a quartering sea or in rainy weather. The net-hauling doors are arranged over a great portion of the forward length.

Generally, they are placed well forward to permit better control of the boat while hauling the nets, and the mechanical net haulers are usually located forward. A second door is often found in the hull, about half way between the forward and aft openings, used for picking when the net is to remain without resetting.

Superstructure Design

Headroom is usually about 7 feet in the working flat, although there is no apparent reason for this excessive height. The most efficient boats are those in which all openings are low to the water, or the working flat is raised to a point where it is convenient to lean out.

Height in the stern is disliked because the nets have a tendency to fly off to leeward when being set. The superstructure across the stern, therefore, is usually carried

(Continued on page 43)

* Excerpted from material by Thomas E. Colvin, Naval Architect, Waukegan, Ill., presented at the Second World Fishing Boat Congress, Rome, Italy.

Electric Salmon Guides Found Feasible

Washington Tests Show Efficiency Under Actual Operating Conditions

FURTHER answers to the problem of electrically guiding sea-bound salmon to safety from dangerous river areas, may soon be available, from recent experiments at Lake Tapps, Wash. According to the Bureau of Commercial Fisheries, March observed the beginning of the second year in these full-scale, field experiments with electrical fish guides.

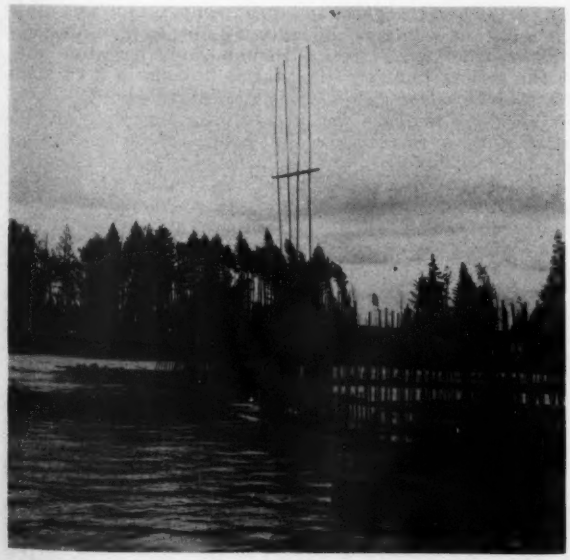
The research is being accomplished by teams of research biologists and electronic scientists from the Seattle Biological Laboratory (formerly Pacific Salmon Investigations), headed by James E. Mason. Research is under the direction of the laboratory director, Clinton E. Atkinson. The Puget Sound Power and Light Co. is giving full cooperation, as the site is their water reservoir.

The tests were scheduled to extend through spring migration. Both native salmon and 9,500 hatchery-reared cohos, furnished by the Washington State Department of Fisheries, were used. The purpose of the extensive investigations is to find a satisfactory method of keeping fingerling and yearling, migrating, anadromous fishes away from dangerous areas at power plants and water-use diversions.

"During the best experimental conditions in 1958, about 77 per cent were guided into traps with electricity. We hope this figure will rise with improvement of techniques, and that we can bring efficiency to the point where we have a new tool of practical use," Mason said.

The Coho salmon, reared at Green River state hatchery, were tattooed in five colors for identification purposes. A small colored mark about the size of a pin head was made with a portable machine. The tattooed fish were to be recovered later, with portable traps. Because of the muddy water, the electrical installations were supplemented with 4,000 lights to act as a repulsion device or as a lighthouse, which ever is necessary.

In such experiments as these, an 800-foot electric fence is used to guide downstream migrants. The fence consists of five rows of one-inch pipe electrodes, spaced two feet apart. The electrodes hang in the water carrying pulsating direct current, supplied by a source on shore.



Installing electrodes used in fish guiding studies at Lake Tapps, Wash.

James E. Mason, project leader of guiding experiments at Lake Tapps inspects light reflectors used in Seattle Biological Laboratory salmon tests.

Power, of the type required to energize the electrodes, is generated by equipment designed and built by biologists and electronic scientists of the Bureau of Commercial Fisheries in Seattle. All the intricate, electronic devices to provide control of the intensity as well as the pattern of the electrical field, are housed in a large, enclosed trailer on shore.

As the fingerling salmon approach the electrical field, they are guided into a trap to be counted. An additional trap is used to recover any fish which gets through the electrical field. In this way, the actual effectiveness of the device under normal field conditions is determined.

Techniques of filtering seaward migrants out of large water masses must be developed, if preservation of salmon runs at proposed high dams is to be biologically and economically practical. The construction of many dams in the Pacific Northwest has caused concern to the fishing industry and to conservationists. Their anxiety stems from interference with migration of salmon and trout to and from spawning grounds. Protection of the down-stream migrants for safe passage is particularly difficult, when the fingerlings are exposed to danger areas, such as water diversions for irrigation, or turbines and spillways.

Initial experiments, in the fall of 1951 were laboratory tests seeking electrical conditions most effective in controlling movements of salmon fingerlings in still water. That voltages required to control the movement of small fish were injurious or even lethal to large fish, was one of the major problems. Therefore, parallel studies were made to discover electrical properties detrimental to fish.

Expanding laboratory research progressed to experiments in flowing water, with attention focused on electrode arrays and field patterns. Intensive testing of pulse frequencies, pulse durations, voltage gradients, and wave forms are aimed at discovering desirable electrical conditions for guiding salmon fingerlings away from hazardous areas.

The electrical guiding experiments, in operation nearly eight years, have been conducted for the purpose of obtaining solutions to the four general fish migration problems: guiding adult salmon around barriers which block upstream migration; guiding young fish safely around danger spots on their downstream migration; separating wanted from unwanted fish; and protecting young fish from predators.

Progress Is Responsibility of the Industry

Shrimp Association of the Americas elects officers and hears conservation and marketing obligations at annual convention

"Captain Scooter" was built for W. L. Hardee of Brownsville, Tex. by Diesel Engines Sales Inc., St. Augustine, Fla. The 67' shrimper has a 150 hp. D342 Caterpillar Diesel turning 50 x 34 four-blade Federal propeller. She has Yocam batteries, 515½T Stroudsburg hoist, and Goodrich Cutless rubber bearing.

AT the annual convention of the Shrimp Association of the Americas, June 18-20, Mexico City, Arnie J. Suomela, commissioner Fish and Wildlife Service, urged the shrimp industry to see that consumers are given a high quality shrimp. He said the industry should utilize all means to promote the use of shrimp.

The fortune of the industry is the responsibility of the men who make it up. Industry alertness and a willingness is needed for maintaining a competitive position with other foodstuffs. They are also needed for broadening the sources of shrimp supply, he stated.

Voluntary standards for finished products, improvements in sanitation aboard vessels and in plants, improvements in packaging and marketing methods by both industry and government, shows progress toward better marketing, Suomela said.

The budget for promoting shrimp by the Shrimp Association of the Americas has been increased 25 percent announced Hector Ferreira, Guaymas, Mexico, new president elected during the convention. Others elected were vice-presidents, J. Roy Duggan, St. Simons Island, Ga., and Morgan Daniel, Port Lavaca, Tex.; secretary, Manuel Zepeda. Garcia, Mexico City; and treasurer, J. R. Clegg, Brownsville, Tex. John Mehos, Galveston, Tex., retiring president, becomes chairman of the board.

In addition to stepping up advertising and publicity, the board of directors voted to extend the quality standards on shrimp at the earliest possible date. Robert Grandy, Harlingen, Tex., is the new chairman of the Quality Control and Research Committee, and Lionel Hodgson, Brownsville, Tex., has been appointed chairman of the Advertising and Publicity Committee.

Speakers for the general session included A. R. Lantz, Los Angeles, Cal., president of Southern California Fisheries Association, who stressed advantages of institutional selling and the need of quality standards to do so. George Arata, Jr., White Plains, N.Y., presented proposed point-of-sale merchandising materials. Murray Wheeler, Washington, D. C., director of public relations, reviewed the past years accomplishments in advertising and publicity.

Suomela said the Gulf shrimp fishery is a young industry. There are species other than whites, pinks, and browns to be harvested, and there are other productive waters to be fished. Full utilization of marine resources dictates that these potential shrimp resources be examined, he continued. But, sight must not be lost of the importance in maintaining stocks now supplying the market.

To do this, better knowledge of shrimp biology is needed. For sound management of shrimp resources, areas inhabited by several stocks must be known as well as spawning and nursery grounds, routes of migration, rates of growth and mortality, and the effect of variations in the ocean climate.

Federal Shrimp Research Program

The Federal Government, with the Gulf states, is developing a broad shrimp research program for the Gulf of Mexico. It will offer an opportunity for closely coordinated biological and oceanographical research throughout the area. If this program could be fully implemented, in a few years the information would be enough to indicate when, where, and how each shrimp stock should be harvested, to provide maximum sustainable yield, Suomela said.

For reasons unknown or little understood estuaries and marsh areas are particularly favorable for survival and growth of young shrimp. In these areas lies the key to sharp fluctuations in shrimp abundance. Once realized, the supply can be forecast with benefit to the resource and savings to industry.

Despite importance of estuarine areas to shrimp production, changes are being made along the coast. Expansion of human habitation and industrialization is encroaching on the environment, with attendant changes in water flow, and quality. With careful planning it may be possible to have both engineering projects and marine resources. But, it will take a great deal of basic research to lay the plans.

Marketing Shrimp

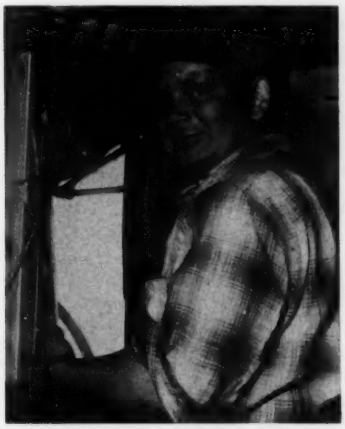
Many factors within the industry affect the market. Sales of poor quality have an adverse effect. Speculative manipulations of stored stocks are potentially dangerous. Any failure to recognize and meet competition from other products is a source of difficulty. Failure to plan for competition from new sources of shrimp can be harmful.

The fishing industry, like agriculture, is in a constant state of flux. One factor, however, is stable—the United States is essentially a non-fish-eating country. Even with all the improved facilities and modern handling-packaging techniques making seafood accessible to nearly everyone, the per capita consumption has remained at 10 to 11 pounds for many years. At the present, many competing agriculture commodities are selling at lower prices. This makes the task of keeping fish and shellfish purchases above 10 pounds more difficult.

Except for a few brief periods, the demand for shrimp has always been high. Many thought the market to be insatiable unless prices rose to a point beyond the people's reach. As a result of energetic marketing programs this has been generally true. With the total supply of shrimp more than doubling in the past ten years, the per capita consumption figure has held closely to one pound.

With the cost of increasing fishing vessels, fuel oils, nets and gear, the cost of production is rising. This makes holding the per capita figure more difficult still. This used to be a problem for the domestic industry alone. In recent years, imports have accelerated to the point that importers are going to be competing with each other as well as the U. S. industry.

Fishfinder Doubles Dragger Hauls



Captain Charles Stiansen, of Islip, N. Y. boat "Priscilla Ann" uses a fishfinder to speed up fishing operations and increase catches.

ACCORDING to Captain Charles Stiansen of the dragger *Priscilla Ann*, Islip, Long Island, the requirements for profitably competing in today's wholesale fish market involves faster fishing operations and consistently substantial hauls. To meet these requirements Stiansen has installed an electronic fishfinder, and claims to have more than doubled his hauls in fewer fishing hours.

The fishfinder is designed to detect schools of fish with rapidity and certainty. The skipper can "see" that fish are present before he casts his nets. The scope display of a school of fish, according to its light intensity, can indicate the general spacing of fish in a detected school and estimate the number of fish present. In a few months, Stiansen says he has been able to analyze the various scopes of presentations well enough to determine the species of some of the fish encountered.

But as he points out, "this is gained only by experience, and study of each school that is detected. In time you catalog a memory image of each, and analysis becomes more dependable."

The fishfinder aids in avoiding snagging of nets on underwater objects which are often present where fish congregate. Being able to avoid wasted trawls, to safeguard against lost catches due to snagged nets, and to minimize maintenance on nets and component gear can add up to substantial savings. The fishfinder can contribute materially to the speed of getting fish to market in quantity.

The Stiansen operation consists of bottom or near-bottom trawling for such fish as cod, fluke, flounder, porgies, whiting, and butterfish. Known fish habitats, major wrecks and feeding areas are marked on specially prepared charts, with Loran fixes used to pinpoint these areas. The fishfinder then becomes the conclusive link in the chain of operations. Stiansen points out that their nets are now handled more frequently in splits, a method of binding a full, trailing net in seconds in order to facilitate bringing the catch aboard. It enables emptying one section at a time on the deck for simpler handling. The finder also serves as a depth-sounder for navigating through homeward bound channels.

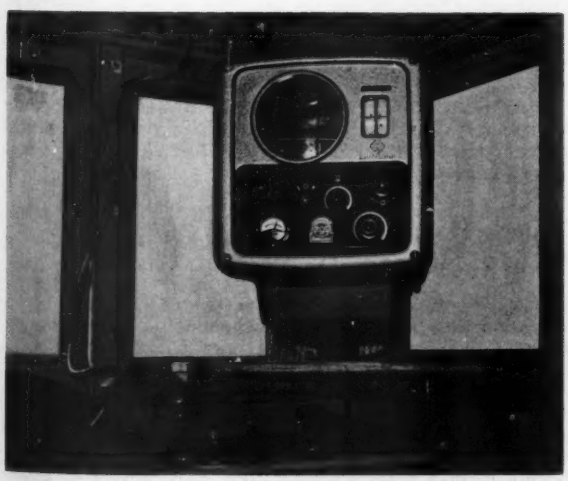
The RCA Fishfinder LAZ-16 may be used an an example of how many types of this equipment operate. The working of the LAZ-16 Fischlupe is based on the principle of echo sounding. A motor-driven contact assembly releases electrical starting pulses at prescribed intervals. These pulses produce transmitting pulses in the general section of an amplifier-generator. The pulses have a frequency of 30 kc., their transmitting power being constant through the whole pulse length.

A transducer mounted on the hull in a faired housing converts the electrical energy of the pulse into acoustic energy, and vice versa. Its action is based on the lengthening and contracting of rods due to the application of a pulsed magnetic field, producing an ultrasonic vibration which is transmitted through water. A single transducer is used for both transmitting and receiving in order to simplify installation and operation.

The transducer is installed in such a way that the elements emitting the sounding impulse are in direct contact with the water. This is done to limit the loss of energy, as would be the case if the sound waves had to go through the ship's hull. The echo signals received by the transducer are amplified in a multi-stage amplifier located in the transceiver to a level sufficient to give a distinct indication on the cathode ray scope.

The fishfinder aboard the *Priscilla Ann* is the RCA LAZ-16 Shrimplupe model, used for relatively shallow waters, such as that in which the Stiansen vessel operates, and for their type of fishing. The Shrimplupe utilizes a fixed range of 0 to 68 fathoms to monitor general underwater activity and a variable range for close up viewing. The variable range is to permit the observation of any 2.8 fathom segment, providing magification up to 40 times of any detected object.

It is claimed that by the shape, size, brightness, and position of the picture, objects below the vessel may be interpreted better by scope presentation than with other systems of indication. An RCA Fishfinder similar to the type installed on the *Priscilla Ann* and an RCA LAZ-13 Recording Depth sounder have been installed aboard another Stiansen dragger, the *Pauline Bertha* operated by Captain Stian Stiansen, Jr.



RCA fishfinder is located close to wheel of dragger "Priscilla Ann".

Captain Stian Stiansen, Sr. founder of the Stiansen fleet.

NORTH ATLANTIC

Fishing Fleets Blessed at Massachusetts Ports

Seventy-eight Gloucester, Mass., fishing vessels were blessed by Richard Cardinal Cushing last month before a crowd of 10,000 people, while outside ceremonies scheduled for Provincetown were dampened by rain and cold.

The Cardinal read the names of boats being blessed and then delivered a short address from a platform overlooking Pavilion Beach, where the gayly decorated fishing boats had gathered. After the address the procession reformed and walked to the outdoor altar in Fort Square. Here the Cardinal delivered a solemn pontifical benediction for several thousand people.

The ceremonies climaxed the annual St. Peter's Fiesta, a four day celebration featuring religious events, dancing, sporting contests, and fireworks.

The Rev. Leo J. Duart officiated at the Provincetown blessing, after rain had called off the assembling of fishermen and the march to the annual Fishermen's Mass. The blessing this year was the most abbreviated in its twelve year history, due to canceling of events by the poor weather.

Record Landings For June By New Bedford Scallopers

With the landings of *Malene and Marie, Florence B,* and *Baltic* on June 30, that month's total landings went over the two million pound mark for a June record in New Bedford, Mass. It is only the second time the figure has been topped in any month during the city's history.

Average prices paid during June has been 47 cents a pound. In August 1943, a total of 2,098,450 pounds was landed, but the average price, then, was only 39 cents a pound. June's landings based on hails at pier 3 fish auction, are 2,018,600 pounds.

The largest single trip of sea scallops landed in over six years was unloaded earlier in the week from the *Pelican,* owned by Captain Jakob Simonsen. Her catch weighed out at 19,876 pounds.

New Bedford Scallop Festival 1959

The New Bedford (Mass.) Sea Scallop Festival will again be sponsored by the Exchange Club of that city, in cooperation with the New Bedford Seafood Council. The festival will be held in Marine Park August 7-8. Chairmen are Charles E. Sharek, Jr., and Dr. Walter M. Pejko. Plans for this year include selection of a queen, scallop recipe contest, inspection of a scalloper, harbor cruises, packing plant visit, whaling Museum tour, and scallop dinners.

New Bedford Pier Site Survey

A survey to determine the feasibility of a 400,000 square-foot fish pier from Marine Park south into New Bedford Harbor, was scheduled for completion early in July. The survey was to include consultations with Army engineers on the physical layout of the harbor bottom south of Marine Park and west of Crow Island, a rough design of the proposed pier, and a total cost estimate.

Robert E. MacKinnon, chief engineer for the Division of Waterways, State Dept. of Public Works, said Army engineers probably would not allow extension of piers beyond the harbor bulkhead. This is some distance from the channel originally thought to be the maximum point for expansion.

New Bedford Boat Sinks

The 86-foot *Jacintha,* one of the largest draggers and highliner in the New Bedford, Mass., fleet sank after a collision with Boston trawler, *Swallow. Jacintha,* owned by John C. DeMello and Sofus Mortensen of Fairhaven, was valued at $120,000. At the time of the collision she had 25,000 pounds of fish aboard.

Less than five hours before the *Jacintha* sank, two other New Bedford scallopers, the *Moonlight* and the *Florence Lee,* were in collision on the Georges Bank. There was no leakage and the boats continued fishing.

Draggers Get Life Rafts

Four New Bedford, Mass. draggers, the *Flamingo, Ursula M. Norton, Edgartown* and *Laura A.,* and the Point Judith, R. I. dragger *Ocean Clipper,* are being fitted with Seafarer inflatable life rafts. The 12-man rafts are stowed in a new type fiber glass, rubber-sealed container which provides maximum weather protection.

A service station for Seafarer life rafts has been established at J. W. Durant, Inc., Homers Wharf, New Bedford, where parts, material and equipment for servicing and repairing rafts will be available. Capt A. J. Pedersen of Portland, Me. is U. S. distributor of the Seafarer line.

Gloucester Landings Rise

June 1959 landings for Gloucester, Mass., amounted to 19,140,500 pounds, topping June 1958 by 1,025,000 pounds and May 1959 by 1,963,800 pounds. Again as in May, five days showed over one million pounds landed. Sixteen boats brought in 1,282,500 pounds June 1. June 8 produced 1,932,500 pounds for 38 vessels. On June twenty second, 1,365,500 pounds arrived on 25 boats. Nineteen vessels unloaded 1,130,000 pounds for June 25, while 8 boats brought in 1,013,000 pounds on the 29th.

First Swordfish Reported

The first swordfish report of the season was received when the fishing vessel, *Gertrude G.,* landed 1,400 pounds of the fish at Woods Hole, Mass., on June 24.

Would License All Massachusetts Fishermen

All Massachusetts salt water fishermen should pay for an annual license, according to John F. Dolan, Ipswich representative. He said most coastal states charge fees ranging from ten to 100 dollars. Dolan claims the result could be establishment of a fund to help fishermen, through harbor improvement and law enforcement.

He cited Francis W. Sargent, former commissioner of the State Department of Natural Resources as a prime mover in efforts to license salt water fishermen. "It is a distasteful subject," he admitted. "But, if we are going to sponsor fisheries research studies a marine fisheries fund is important to pay for them. The state does not have the money for them now."

Woods Hole Research Tops Russian Efforts

Disputing reports of a U. S. lag behind Russia in ocean research, George P. Miller, chairman House Sub-committee on Oceanography, said the Soviet does not have "anything to compare with Woods Hole".

Before concluding a two-day tour of Woods Hole, the subcommittee assured they would see that the recommendations of the National Academy of Sciences calling for a stepped-up ocean research program be carried out. This would include a proposed ten-year expenditure of $600,000,000.

Gloucester Boat to Fish Tuna

Gloucester, Mass., vessel, "Golden Eagle" has been conducting experimental tuna fishing to promote a steadier, bigger supply. Described as the most important recent joint activity for New England promotion, the trial is conducted by a Maine packing company, the Gloucester crew, and federal fisheries men. On the 18th of June the Gloucester vessel brought in 30,000 pounds of tuna.

Lawrence C. McEwen's "Golden Eagle" is using a floating trawl, tested by the Fish and Wildlife Service. Fish caught will be landed in Gloucester, frozen and shipped to Riviera Packing Co., Eastport, Me.

Record Landings At Rhode Island Port

The commerical fishing industry at Galilee, R. I., recently established a new week's record there, for edible fish landings, of 500,000 pounds. Joseph A. Lewis, manager of the Point Judith Fishermen's Cooperative, said the fleet was paid the gross figure of $74,000 for the fish.

According to Lewis, it looks like a banner year for the industry. There is evidence that broadbill swordfish will be as abundant as last season, when they were landed in record numbers.

Industrial landings for the same period totaled 5,000,000 pounds. Menhaden schools were located two weeks before. Menhaden were so plentiful that, occasionally, Cooperative management had to stop boats from fishing for 24 hours. This was necessary to prevent overloading of processing facilities. Lewis said menhaden landings were 10,000,000 pounds ahead of last year.

Propose Extended Shellfish Cultivation In New Jersey

Legislators from Cape May and Cumberland Counties, New Jersey are scheduled to draw up measures pertaining to the bay shellfish industry. The measures will be based on proposals made during a recent meeting of county representatives in Cape May.

Keynote of the past meeting was the strong emphasis placed on biological aspects of the use of lower Delaware Bay for shellfish production. This discussion centered on the area south of the present clam line which extends into the bay from Pierce's Point.

Biologists have urged the use of that area on a limited basis for cultivating the bottom for sets of small shellfish to penetrate a layer of coral. This growth has kept the small shellfish to a minimum in the lower bay. It is agreed that the recommendations of the biologists will be a major factor in any proposed legislation.

"Delaware" Moves to Gloucester

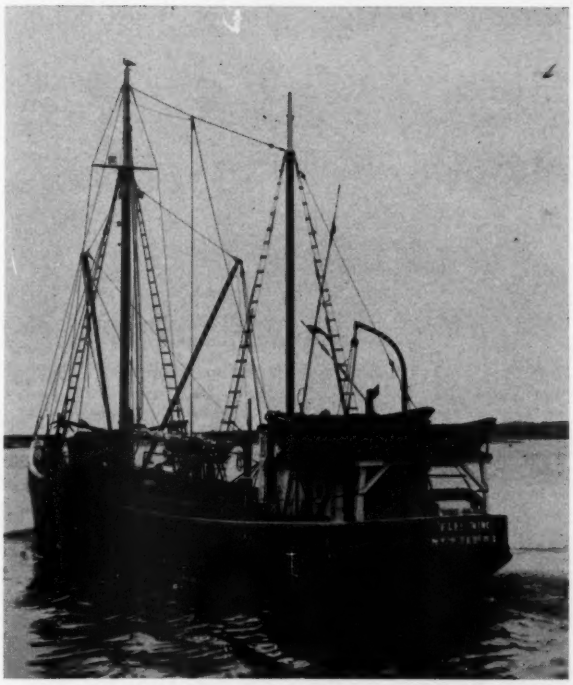
The Bureau of Commercial Fisheries research vessel, "Delaware" arrived in Gloucester during June to transfer gear from her Boston headquarters to the new Exploratory Fishing Headquarters being completed on the State Fish Pier.

Sea-Shore Fisheries Course at Maine School

Beginning September, state operated, Maine Vocational Technical Institute will offer a two year course in seashore fisheries. The $15,000, appropriated by the last Legislature for training, will be matched by the Federal Government.

Students will study navigation, marine engines, fishing methods and gear, legal aspects, marine biology, oceanography, etc. The program also calls for study in care and refrigeration, processing, packing and marketing, business management, boat maintenance and repair, and electronic instruments.

An advisory committee, comprised of representatives from various branches of the industry, will aid school officials on the nature of courses. Work experience and job placement will be promoted by the industry.



The 92-foot scallop dragger, "Fleetwing" is owned by Capt. John G. Murley of Fairhaven, Mass. She is powered with a Caterpillar D375 Roots Blown Diesel.

Two Additions To Cape Porpoise Fleet

Two new Cape Porpoise, Me. lobster boats, built by George E. Bordreau, Upper Wedgeport, N.S., are to have new Palmer engines. Capt. Harry Emmons is getting a Model IH240 with direct drive for his new craft, while Capt. Frederick Crowell will have an IH264 model with 2:1 Paragon gear.

A new Palmer IH264, 135 hp. engine with Paragon 2:1 hydraulic reduction gear has been installed in Capt. Frank Darling's lobster boat at Freeport, Me. A Palmer IH240, 120 hp. engine has gone into Capt. Donald Doughty's lobster boat at Diamond Island. All of these engines were sold by H. P. Simpson of Portland, Me.

Boats Overhauled at So. Portland

Several fishing boats have been overhauled and fitted with new equipment recently at Story Marine Railway, South Portland, Me.

The 97' dragger *Theresa R.*, owned by Harold Gowen of Portland was caulked and painted, fitted with new guard iron, zincs and 6" Tobin Bronze shaft.

Capt. Harry Christensen's gill netter *Anna C.* received caulking and painting, had new cap rail and net sheathing and had her net lifter reconditioned.

The 65' *Joyce Marie*, owned by Joseph Coker and Lester Card of Portland, was caulked and had her propeller reconditioned. New equipment from The Harris Co. installed on the boat includes an 8" Fairbanks-Morse fish pump, operated by a Wisconsin engine, Gates suction hose, Stewart-Warner instrument panel and 32-volt Exide batteries. The vessel recently was repowered with a General Motors 6-71 Diesel.

Harold Gowen's 97' dragger *Courier* has been sold to F. F. Quinn of Hampton, Va., but will continue to fish out of Portland for the Summer. Story renewed her fish sheathing and overhauled the rudder. Quinn's 104' steel trawler *Bobby & Jack*, which is at Portland for the Summer, was painted throughout and fitted with new zincs.

New 36' x 11' x 3'6" combination seiner and lobster boat "Flora B." owned by Capt. Roy Vose of Cushing, Me. Designed by Newell McClain, Jr. and built by Anderson Boat Works, Thomaston, Me. Her General Motors 4-71 Diesel, with 2:1 reduction and 26 x 22 propeller, was sold by Hubbs Engine Co. and installed by Harvey Gamage, So. Bristol.

Gamage Launches Scalloper, Starts Another

The 80' scallop dragger *Neptune*, built for Capt. Nils Risdal of Fairhaven, Mass. was launched by Harvey Gamage, Shipbuilder, South Bristol, Me. on June 11. She was designed by Dwight S. Simpson & Associates, Boston, and is powered by a D375, 300 hp. Caterpillar Diesel sold by Perkins Machinery Co. Inc.

Capt. A. J. Pedersen of Portland, Me. has ordered an 80' vessel from Gamage, to be fitted for scalloping out of New Bedford, Mass. but also designed for dragging. Power will be furnished by a D375 Caterpillar Diesel.

New Lobster Boats at Pine Point

Capt. Cecil Pinkham of Pine Point, Me. is having a new 38' lobster boat built under the supervision of Ward Bickford. She will be powered by a D273, 85 hp. Allis-Chalmers Diesel with 1.5:1 Capitol hydraulic reduction gear.

Capt. Fred Thurlow of Pine Point is installing a Model 165 Flagship engine with 1.5:1 Paragon hydraulic reduction gear in his new 34' lobster boat, built in Nova Scotia. Both engines were sold by Harbor Supply Oil Co. of Portland.

The 32' harbor delivery boat *Grampus*, operated by Sargent, Lord & Co., Portland, Me., has been repowered with a Model 150 Flagship engine with Paragon 2:1 hydraulic reduction gear and Perko controls.

Hopper Joins Harris Co. Staff

Clinton W. Hopper, 35 Harlow St., Brewer, Me. has joined The Harris Co. of Portland as salesman in Eastern Maine. The firm has been appointed distributor of Wonder Bar, a new marine telephone ground plate, made by Layton Industries, Dorchester 22, Mass.

A Lavoie Bat 5 radar from The Harris Co. has been installed on the West Jonesport, Me. sardine carrier *Frances & Eveyln*, owned by Capt. Raymond Smith. Power for operating the radar is supplied by 1500-watt AC, remote control, Kohler generating plant.

A Model CR-107 RCA Radiomarine radar has been installed by Harris in the Portland Pilot boat, while a Bendix DR-17 survey depth recorder has been purchased by Portland Pipe Line Corp. to check water depths for tanker docking.

Connecticut Laboratory Gets Grant

A grant of approximately $50,000 to the University of Connecticut's Marine laboratory at Noank to finance research into radioactivity in marine organisms has been approved by the National Institute of Health.

SOUTH ATLANTIC

New Tidewater Commission Changes Oyster Programs

Maryland's official oyster farming philosophy is undergoing a sharp reversal under the new Tidewater Fisheries Commission. Rather than wait for oysters to come to public bars, the Commission will conduct heavier planting in seed areas. Commission biologist, Ralph C. Hammer, is in charge of the program. He is sure it will provide more oysters and the initial spur for the long range Chesapeake Bay seafood build-up.

The Commission plans at least 500,000 bushels of seed oysters next year. The goal is 1,000,000 bushels. If the project is successful, it will provide five times the amount the State has been planting in recent years. The problem will be obtaining the seed oysters. They are not presently available in Maryland or in nearby states in large quantities.

The new Commission tackled the rehabilitation problem at its first meeting last month. In other action, the Commission voted to redraft the crab pot regulations. It would raise the limit from 50 per person to 100. The license fee would remain at $10.

Fishermen have been obtaining a second license in the wife's name. This creates an enforcement problem as the wife must be present when the pots are fished.

A regulation was adopted stripping sidearms from the Commission's inspectors in normal routine or patrol duty. It would permit arms available in a boat or some other place for emergency.

H. C. Byrd Is Chairman, Acting Director Maryland Tidewater Fisheries Commission

The new Tidewater Fisheries Commission has named Dr. H. C. Byrd chairman and acting director. Byrd, former president of the University of Maryland, announced the Commission will attempt to bring together conflicting views on fisheries administration.

Byrd said an immediate search will be opened to find a professional fisheries man to fill the position of director. Both Byrd and the director are subject to approval by the Governor.

Request Crisfield Harbor Survey

A request to U. S. Senator, J. Glenn Beall, by Crisfield, Maryland, interests, seeking a survey of the harbor with intent to deepen the entrance from Tangier Sound to the city docks, has met with favorable response. It is felt Crisfield is in a strategic location as a deep water port. The port has a 12 foot deep channel, but needs a 20 to 25 foot depth to accommodate the large vessels expected to use the facilities there.

Beall, in a letter, stated that he would introduce a resolution authorizing Army engineers to make the survey. The resolution has to be approved by the Senate Committee on Public Works, and a request made to the Senate Appropriation Committee for funds.

Kent Watermen Name Clagett

Earl Clagett has been elected chairman of the Kent County Branch, Maryland Commercial Watermen's Association. The group has also named Brad Kerr assistant chairman, Bob Edler as secretary, and Donald Edwards as treasurer.

Elected as directors to serve one year terms were Irving Crouch, Bud Edwards, Elmer Reihl, John Boulter, John Edwards, William DeFord, Bobby Clark, and William Fithian.

"Miss Dene", 67-foot, double rig shrimper owned by J. L. Stoval and R. D. Price of Fernandina Beach, Fla. is powered with a 220 hp. 6-110 General Motors Diesel with 4.5 to 1 reduction gear turning a 50 x 42 four-blade Columbian propeller. Included in the equipment is a Petter Diesel light plant, Yocam batteries, 5" Globe Master Ritchie compass, and a Stroudsburg 518T hoist. She was built by Diesel Engine Sales, Inc., St. Augustine, Fla.

Maryland Commission Hears Trap Users

As the law is construed, crab traps are lawful in some parts of Somerset County, Maryland, and unlawful in others including Smith Island. When the law was made permitting their use, Smith Island was recorded as against traps. Now, one section is reportedly using traps in substantial numbers.

Chairman of the Tidewater Fisheries Commission, Dr. H. C. Byrd, visited there recently to arrange for a meeting with crabbers from all sections of the island. The pros and cons of the matter were scheduled to be heard at the meeting, with the full membership of the Commission expected to be present.

North Carolina Commission Bill Killed

The bill to create a North Carolina Fisheries Commission died in committee. The commission was sought by commercial fishermen who have complained they do not receive enough attention from the State Department of Conservation and Development.

Demise of the bill came from lack of time rather than lack of merit. It has been conceded that the commercial fishing industry needs protection of some regulations concerning certain waters. The House State Government Committee acted to direct a commission on reorganization of state government to study the proposal and make detailed recommendations to the 1961 General Assembly.

Under terms of the bill the Commercial Fisheries Commission would have been organized by July 1. Areas for membership were designated and members would have been appointed from seven areas with two 'at large'. All nine would have had to qualify as commercial fishing areas. Members would have been appointed by the Governor for staggered four year terms.

N. C. Landings Up 53% In First Quarter

During the first three months of 1959, landings of fish and shellfish at North Carolina ports totaled 19.5 million pounds for an increase of 53 percent over the corresponding period of 1958. Nearly 45 percent of the first quarter catch consisted of menhaden, at 8.7 million pounds.

Production of fish and shellfish for March 1959 amounted to 5.1 million pounds or 152,000 pounds greater than March a year before. Alewives and blue crabs made up 54 percent of the total. Blue crabs landings totaling 1.2 million pounds were 763,000 pounds greater than for the same period in 1958.

South Carolina Donates Hatchery

Bills providing for the acceptance by the United States of a fish hatchery in South Carolina have been introduced in Congress. The bills provide for the Secretary of the Interior to accept by donation, title to the Orangeburg County fish hatchery, together with rights to take adequate water from Orangeburg County Lake. They have been referred to the Senate Committee on Interstate and Foreign Commerce, to the House Committee on Merchant Marine and Fisheries.

S. C. Fish and Shellfish Production Up

During the first quarter of 1959, landings at South Carolina ports of fish and shellfish amounted to 2.1 million pounds, or 34 percent greater than for the like period in 1958. Blue crab landings represented 62 percent of the first-quarter total.

Georgia Fishermen To Pay Sales Tax

The Georgia Revenue Department began June 1 to demand collection of three percent sales tax on equipment, materials, fuel and supplies to commercial fishermen and shrimp boat operators. Deputy revenue commissioner George Sims, said he did not think the price of shrimp for consumption or bait would rise.

The department does not believe the three percent tax would amount to more than an inconsequential cost, he said. In June 1955 Attorney General Eugene Cook ruled that the tax would apply to such transactions, but at the time fishermen were considered to be engaged in intercoastal or foreign commerce, and not subject to it.

Recent court decisions have held the sales tax a vendor's tax, and the seller presumably would collect the full amount from fishermen and shrimpers. Primary effect is expected to be felt in Savannah, Darien, and Brunswick.

First Quarter Georgia Landings Up 21%

During the first quarter of 1959, fish and shellfish landings at Georgia ports totaled 2.0 million pounds. This is a gain of 21 percent compared with the same period of 1958, according to Bureau of Commercial Fisheries reports. Blue crabs at 1.5 million pounds comprised 75 percent of the three-month total.

Landings For Hampton Roads Area

During June 1959, Hampton Roads, Va. dragger landings were comprised almost entirely of fluke which totaled 121,900 pounds. This represents an increase of 92,300 pounds over the same month the year before. Total dragger landings at 123,200 pounds for 25 trips showed a decrease over June 1958.

Fluke also showed an increase in pound net catches in the Hampton Roads area, as did butter fish which increased 3,400 pounds for a total of 12,400 pounds. Bluefish also showed an increase. Total pound net landings amounted to 369,700 pounds, a drop from the total one year ago.

Isaac Fass Introduces New Pack

Issac Fass, Inc. of Portsmouth, Va. is producing filleted and dressed fish in a new one-pound consumer pack carton. The fish are first packed in a vacuum-sealed Durafilm bag and then placed in an attractive paper box with the Fass Brand label.

Among the items being packed in the new carton are dressed flounders, sea bass, sea trout, croakers, spot and porgies; fillets of flounder, sea bass and whiting; scallops and shrimp.

New Engine For Poquoson Boat

The 75-foot trawler, *Sea Pal*, owned by Captain H. Milton Forrest of Poquoson, Va., has been equipped with a new Caterpillar D342, turbocharged Diesel, including 3:1 reduction gear with power take off for operating the winch. The engine was sold by Ralph A. Amos, engineer with Virginia Tractor Co. Inc., Richmond, Va., and installed by Colonna's Shipyard, Inc., Norfolk, Va. President of the installing firm is B. O. Colonna, vice president is W. W. Colonna, and general superintendent is Carl D. Colonna, Jr., Sea trials were conducted last month, and the *Sea Pal* has resumed fishing.

Virginia Seafood Production High

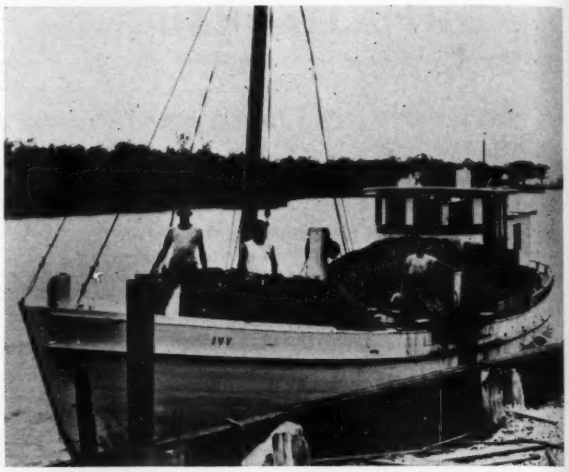
During the five year period of 1951-55, an average of 323,296,800 pounds of fish and shellfish were landed at Virginia docks, the greatest weight on record. About 50 million pounds more fishery products are harvested from the ocean than from Chesapeake Bay, but Bay landings are four times more valuable. This is accounted for by menhaden, which pound for pound makes up nine tenths of the ocean catch. This information is published by the Virginia Fisheries Laboratory, Gloucester Point, in "Treasures from the Sea, The Virginia Seafood Industry".

Ratify Tortugas Conservation Agreement with Cuba

The Senate has ratified an agreement with Cuba for conservation and expansion of shrimp resources in the Gulf of Mexico. The Convention, signed in Havana last August, was approved unanimously. It calls for the establishment of a commission to develop the maximum sustainable productivity of shrimp resources in the Tortugas shrimp fishery. This is a joint fishery of the U. S. and Cuba off the coast of Florida and Cuba.

The agreement grew out of the discovery in 1955 that landings of shrimp indicated a substantial portion of the catch was being taken before reaching a more commercial desirable size. Cuba has already ratified the convention. Legislation will be offered later to implement provisions of the agreement.

The National Shrimp Congress, the Southeastern Fisheries Association, The Seapak Corp., St. Simmons, Ga., and the St. George Packing Co., represented business in six southern states supported the convention, according to Senate Foreign Relations Committee reports.



The 60-foot oyster dredger "Ivy" coming into Bena, Virginia with a day's harvest from Chesapeake Bay. She is owned by Captain W. R. Hayes, and is also used for planting shells and servicing nets. Power is furnished by a 4-71 General Motors Diesel.

Florida Boat Law Approved By Coast Guard Authorities

Florida's new boat registration law was approved late last month by the Coast Guard. She is the first state to receive approval by federal authorities for its boat registration law, although it is the 18th state to enact one. Conservation Director, Ernest Mitts, said the program would be rolling by July 20.

Under the law, all boats carrying motors of over ten horsepower, and operating in navigable waters must be registered with the state. A number issued must be displayed on each side of the bow. Failure to display the number is punishable by fines up to $75.

Mitts said a grace period of 90 days will be allowed for owners to register their boats before being cited for failure to do so. Fees range from $1.75 for a 2-year period on boats less than 16 feet up to $10.25 for a 2-year period for craft over 40 feet. Fee includes county registration costs.

Aim of the registration-numbering act is to help enforce the water safety law also passed this year. The Conservation Department is responsible for enforcement of the numbering law.

Shrimping Operations Greatly Increased

John Mehos, president of Shrimp Association of the Americas, says the industry does about 83 million dollars worth of business a year. Shrimpers who marketed about 50 million pounds in 1930, produced four times that much last year. Mehos continued that conservation is a must.

Demand for shrimp is at an all time peak, say marine scientists. More shrimp boats are operating than ever before. Commenting on the claims of declining shrimp production, Fish and Wildlife Service biologist, Ed Chen, said Shrimper's figures are prone to lean on oldtimers' memories. Government production figures, he said, go back only two years. The drop in size of catches could reflect only the substantial increase in the size of fishing fleets.

A bright spot, Chen said, is the discovery of new shrimp strains such as Royal Red found by government scientists in deep water off the Florida and Louisiana coasts. Not yet fished commercially, it is of jumbo size and could prove a seafood specialty.

GULF OF MEXICO

Atomic Dumping in Gulf OK'd By Bureau of Fisheries

A report from the Bureau of Commercial Fisheries said, with reservation, it could see no danger in dumping low-level, radioactive waste in the Gulf of Mexico. The Bureau said particular care must be taken to insure that a public misconception of the effects of dumping does not result in consumers shying away from fishery products harvested in the area. A Houston firm has applied for a license to process and dispose such radioactive matter in the Gulf. Texas shrimpers have expressed concern for the results.

The Bureau laid down several requirements if the Atomic Energy Commission wishes to avoid objections to the disposal plan. The sea should be used as little as possible for dumping. Selection of sites should be made with due regard to the possibilities of fouling nets. Areas should be well marked and publicized. All disposal areas should be well policed and monitored.

Gulf Seafoods Production Up For First Five Months

Production of seafoods for the Gulf coast states for the first five months of 1959 shows an increase in oyster, edible finfish, and crabs, according to the Bureau of Commercial fisheries. Shrimp production dropped for the five state area.

Edible finfish totaled 4,537,000 pounds for an increase of 28 percent. Blue crabs showed an increase of 19 percent with a take of 3,685,000 pounds. Oysters increased 11 percent with 332,273 barrels being produced.

Report on Gulf Midwater Trawl Tests

Harvey Bullis, Jr., in charge of Gulf fisheries exploration and research for the Fish and Wildlife Service, said entirely different techniques must be used for midwater trawls than for bottom rigs. He was reporting on research vessel, *Oregon*, mid-water trawl tests, made in the northern Gulf.

Mid-water schools were found only inside the 20-fathom curve. A depth recorder was used to locate the fish. Catch was razor bellies, anchovies, and round herring. These were taken in amounts ranging from 50 to 200 pounds per tow. Catches were best immediately before sunset and after sunrise, when fish concentrations rose from the bottom. Trawling near the bottom produced heavy catches up to 3,000 pounds per hour. They consisted of croakers, spots, porgies, and large quantities of razor bellies and anchovies.

Texas Oyster Season Good

C. E. Nickerson, Fish and Wildlife representative in Texas Coastal Bend, reported closing of the oyster season with production in Rockport and Corpus Christi, Texas, areas still good. Cool weather had kept the oysters in excellent condition. Dealers reported several thousand gallons were well received in new markets. Oysters in the Corpus Christi region were taken from reefs closed for twenty years. State inspectors graded the oysters large, with excellent flavor.

Cedar Bayou Project Near Completion

The Cedar Bayou, (Texas) Fish Pass project is reportedly near completion. Construction of retaining levees was completed last month. Two dredges are at work excavating the channel to meet the October 1 deadline.

The shrimper "Night Hawk" was built for the Versaggi Shrimp Co. of Patterson, La. by Diesel Engine Sales, Inc., St. Augustine, Fla. The 67' boat is powered by a 150 hp. D342 Caterpillar Diesel equipped with 3:1 reduction gear turning 50 x 34 four-blade Columbian propeller on a 3" Tobin Bronze shaft. Other equipment includes 2 kw Onan generator, Surrette batteries, 518T Stroudsburg hoist, and 7" Ritchie compass.

Brownsville Holds Festival

The seventh annual Port Isabel-Brownsville Texas Shrimp Fiesta was scheduled for July 3-5. The fiesta is held each year to salute the commercial shrimp industry. A king and queen were to be chosen.

Artificial Reefs in Texas Working Well

The first artificial snapper reef, constructed a year ago off Port Aransas, has been giving results reported to be "fantastic". With the recent completion of reefs at Port Isabel and Freeport, Texas now has three active installations. Each reef consists of 600 automobile bodies with concrete anchors. Each reef covers an area of approximately 10 acres.

Texas Shrimper Burns

The shrimp trawler *Brazos* was destroyed by fire in the tide water docks at Freeport, Texas, shortly after her return from Mexican waters. The 70 foot vessel, valued at $50,000, was owned by Johnnie Nelson and E. J. Nini of Aransas Pass.

Louisiana Fleet Blessings Scheduled

Blessing of the shrimp fleet at Violet, Louisiana, will be held August 2, according to Marcel Arcement, chairman of the arrangements committee. Arcement said prizes will be awarded to the best decorated boats. The Rev. Clement Schneider, pastor of Our Lady of Lourdes, will bless the fleet.

Alfred Brizzard is manager of the 1959 Shrimp Festival and Blessing of the Fleet at Morgan City to be held September 6. No other definite plans have been adopted at present. The bill to appropriate money to Louisiana fairs and festivals was passed by both houses, but was vetoed by the acting Governor. The Festival Association will therefore proceed along low-budget lines, as last year.

No Shrimp Season Extension For Louisiana Allowed

The closed season for shrimp in Louisiana's inside waters will extend until the third Monday of August. The Louisiana Wildlife and Fisheries Commission will not extend the open season, now in effect, further than that date.

Under the law, the extension of the season would be made by the legislature which enacted it, and not by the Commission, according to its acting director. The shrimp law, as it was last year, will be rigidly enforced. All boats and personnel available will be shifted to the closed areas to make sure the law is complied with.

Shrimp Production Increases Greatly In Louisiana

Enjoying the big shrimp run after five years of low production, officials believe that Louisiana is on its way to regaining its former position as the top shrimp producing state.

Bureau of Commercial Fisheries figures show that during the first five months of 1959 a total 6,402,500 pounds of shrimp, heads-on was produced in Louisiana. This represents a gain of 133 percent over the corresponding period of 1958. Then, 2,746,800 pounds were produced.

Louisiana Oyster Land Released

Louisiana representative, Horace Lynn Jones of Calcasieu Parish, said the recent release of oyster dredging lands by an Alabama corporation will promote industrial expansion for Louisiana. He said Southern Oyster Shell and Milling Corp. of Mobile has relinquished about 60 percent of coastal water bottoms on which it held exclusive leasing privileges.

He said another corporation is considering a $35 million plant in the Franklin-Baldwin area as a result of shell deposits being made available. Louisiana has the largest known shell deposits in the world. Jones said he will introduce a resolution asking for closer supervision of shell operations by the Department of Wildlife and Fisheries.

Alabama Oyster Survey Set

A survey has been scheduled to determine the extent, if any, of harm to seafood in Alabama waters by excessive rain water recently. George Allen, chief of the Seafood Division, said some felt oyster beds may have been hurt by large amounts of fresh water flooding the bays and sounds.

The survey will be made by Bill Denoran, marine biologist with the Gulf Coast Marine Research Laboratories. Allen said the services of the laboratory had been obtained as consultants.

Other plans of the Seafood Division include opening a division office in Baldwin County at Gulf State Park. Baldwin operators will be able to get their licenses at the office in addition to information concerning seafood and seafood regulations.

Shrimping In Outside Waters of Alabama Allowed

George Allen, chief of the Alabama Seafood Division, announced night and day shrimping will be allowed in Alabama's outside waters, except for a strip permanently closed off Gulf Shores. The closed area extends from Red Shore beacon west of highway 59, eastward to the Florida line and two miles into the Gulf.

Allen warned seafood officers would check and hold shrimpers to legal size shrimp of 50 or less per pound heads-on and 75 or less headless.

Mississippi Tightens Bait Shrimp Law

The Mississippi Seafood Commission passed an ordinance recently which effects bait shrimp fishermen. Under the new law, any licensee will be allowed to issue only two letters to fishermen to catch bait. Previously, the licensees were allowed to write letters authorizing an unlimited number to fish under the same license.

All letters out were immediately voided. Renewal may be made at the Commission office and must be stamped by the secretary.

Pascagoula Holds Blessing

The fourth annual Blessing of the Fleet was held in Pascagoula, Mississippi, June 28. The Rt. Rev. Msgr. P. J. Cary conducted the ceremony. The shrimp and fish boats taking part in the festivities were open to visitors, and paraded on the Pascagoula River. A fleet ball was held and a king and queen were chosen.

Mississippi Fish Kills Not Due to Pollution

William Demoran, Gulf Coast Research Laboratory biologist, blamed recent fish kills in Mississippi on an abundance of microscopic animal life rather than on industrial pollution of the water. He reported that the organisms are normally present in most water and multiply rapidly under certain conditions.

The heavy concentration often dies overnight and the billions of decomposing bodies may have a detrimental effect on fish. Oxygen depletion was the main factor involved in the killing.

Mississippi Seafood Men Elect Simpson

Bill Simpson, Simpson's Canning Company, Gulfport, has been named president of an organization being formed by Mississippi Gulf Coast Seafood producers. The group represents a united effort to better the industry's conditions. Others elected at the Biloxi meeting were Charles Weems of Weems Brothers Seafood Company, vice president; and Roland Agregaard of Agregaard's Seafood Market, Biloxi, secretary-treasurer.

Mississippi Shrimp Abundant

Sea food producers along the Mississippi coast have been enjoying an abundant harvest of shrimp, running 40 to 50 per pound. John Crusoe, Biloxi packer, reported he has 20 boats catching 20 to 25 barrels every few days. He said the shrimp caught are the white specie.

Others on the coast have also reported heavy catches. Clarence Canaan, chief inspector Mississippi Seafood Commission, said Pascagoula boats were returning with large catches, and the shrimp are better than last year.

Biloxi Shrimp Fleet Blessed

Several hundred boats of Biloxi, Miss., shrimp fleet participated in the annual shrimp boat parade and Blessing of the Fleet, which climaxed the two-day Shrimp Festival, June 6-7. Half the fleet participated in the celebration while the rest worked less than six miles out, taking in the first good run since fall. Many of the boats blessed by Reverend Herbert Mullin were on their way to the factories from the shrimping grounds.

Deanna Gill was crowned 1959 Queen of the Shrimp Fleet and ruled over the coronation ball with 1959 Shrimp King, Captain Amos Ross. Ross is best known as a competitor in the old sailing schooner races which, were national attractions in the twenties and thirties.

The award for best decorated boat went to the "Ophelia Williams" owned by DeJean Packing Co. and captained by Wildon Ross, son of the Shrimp King. Ross was presented with a trophy and a cash prize. Also winning awards were Capt. Frank Kovacevich aboard the "Julia" second, and Capt. Oduse Trahan aboard the "Steve M. Sekul", owned by Sea Coast Packing Co., third.

Hub of Knox County's Progressive Fishing Industry

ROCKLAND

Host to the 13th annual MAINE SEAFOODS FESTIVAL

Three vessels of the Rockland, Me. fleet: left to right, 91' scalloper "Pocahontas", owned by Harvey F. Gamage and Capt. Maynard Lammi; 72' dragger "Elin B.", owned by Billings Bros. Co., Capt. Robert Powell, Jr.; 56' dragger "Mabel-Susan", owned by Capt. Edward Billings.

NATIONAL attention again will be focused on Rockland and the Maine fishing industry when the 13th annual Maine Seafoods Festival takes place July 31 to August 2 in the Capital of the State's lobster and seafood business.

Every year, thousands of visitors from every State in the Nation converge upon the port of Rockland to partake of the sea's delicacies. King Neptune and his court will arrive from the sea for coronation of Maine's Sea Goddess of the year, float and boat parades will take place, lobstermen races will be staged, fishermen lost at sea will be memorialized, and 20,000 pounds of lobsters and other seafood will be served on the Festival's waterfront grounds.

President of this year's Seafoods Festival Committee is veteran Rockland lobster dealer Harold W. Look, Sr., who heads the 25 directors and committee chairmen of the Festival which is sponsored by Rockland civic and service organizations and seafood concerns. Leslie Dyer, head of the Maine Lobstermen's Association is a vice-president in charge of food serving, and the Maine Department of Sea & Shore Fisheries is lending its full support.

Fisheries Commissioner Ronald W. Green, a resident of Rockland, says the Festival is the most important regularly scheduled source of publicity and free advertising available to the fishing industry in Maine—worth hundreds of thousands of dollars in getting the public better acquainted with products of the sea.

Located on Penobscot Bay, Rockland is the hub of one of the most productive fishing areas on the Coast. Not only is it the outfitting and distributing center for the mainland Knox County ports of Camden, Rockport, Owls Head, Spruce Head, St. George, Tenants Harbor, Port Clyde, Friendship, Cushing and Thomaston, but it also serves a fishing island empire that includes Vinalhaven, North Haven, Matinicus, Criehaven, Isle Au Haut and Monhegan.

An atmosphere of progress is readily apparent in the Rockland and Knox County fishing industry. Boats are being fitted with new equipment and scientific aids to fishing, shore facilities are being expanded and modernized, new marketing methods are being developed, and resources of the sea are being more fully exploited. The

Lobstermen's docks at Port Clyde, Maine, one of the largest lobster producing ports.

FLAVOR

IS THE MAINE

INGREDIENT!

Maine Lobster will be king at Rockland's Annual Seafoods Festival on July 31-August 2.

THIRTY-TWO VARIETIES OF FISH AND SHELLFISH ARE PRODUCED BY MAINE FISHERMEN—EACH ONE A DELICIOUS TREAT ON ANY TABLE.

THE DEPARTMENT OF SEA AND SHORE FISHERIES HELPS TO PROTECT THIS $75,000,000 INDUSTRY—GUARDING THE FUTURE OF THIS VALUABLE ASSET TO THE STATE OF MAINE.

MAINE DEPARTMENT OF SEA AND SHORE FISHERIES

Augusta, Maine

area has a well diversified fishery, producing fresh, frozen and canned fish and shellfish, as well as a growing utilization of fish and by-products for industrial uses.

Knox County bids well to soon becoming the top seafood producing area of Maine. Last year, the catch of all varieties of fish and shellfish was 96.3 million lbs., in neck and neck position with Cumberland County which had 96.7 million.

Last year Knox County edged out Hancock County in both value and poundage of lobster catch. Knox produced 5.6 million lbs. valued at $2.8 million, while Hancock produced 5.3 millions, valued at $2.6 million.

Rockland was number one Maine port for redfish (ocean perch) production last year, landing 38 million lbs., 5 million ahead of Portland.

Playing a vital role in fostering the orderly development and growth of the fishing industry in Knox County and throughout the State is the Department of Sea and Shore Fisheries.

As guardians of this major industry, the Department has a variety of duties. These include the issuing of commercial fishing licenses, the enforcement of conservation laws, research into economic and biological problems, liaison between the industry and other state and federal agencies, and assistance in the promotion and marketing of seafood products.

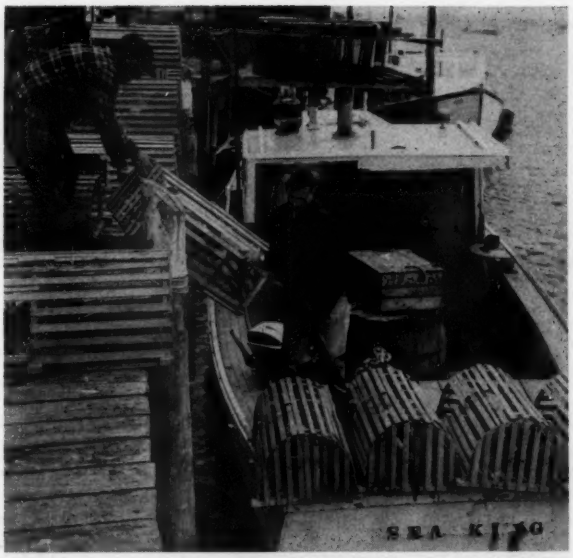
Key members of Commissioner Green's staff include a director of research; a director of promotion and marketing; and a chief warden. In addition to an office staff, there are seven marine scientists, thirty coastal wardens and other employees assigned to special duties.

The mandatory quality grading program for Maine sardines has been heartily acclaimed by sardine packers, including those in Knox County. While added time is required in packing to meet the established standards, the program already is paying off by gaining increased consumer acceptance for Maine sardines.

The Maine Department of Agriculture has jurisdiction over the sardine quality control program and there is a seven-man State appointed industry advisory board which includes two Knox County packers: Edwin Witham of Rockland and Sam Zwecker of Port Clyde. The Maine Sardine Council, of which Richard E. Reed is executive secretary, has a laboratory at Bangor at which the grading operations take place. State inspectors are stationed at the sardine plants.

An important development in the lobster business is the growing use of lobster holding tanks with artificial sea water in inland cities. Such facilities provide a ready supply of lobsters in centers of population. Local outlets can get quick delivery of quality lobsters and the public knows they are always available. The use of such tanks has been beneficial in expanding the market for lobsters and in stabilizing prices.

Rockland is headquarters of the Maine Lobstermen's Association, which last month reelected Leslie Dyer of Vinalhaven as president and executive secretary for his sixth consecutive year. Alfred Fredette of Owls Head was returned as treasurer, and Robert Davis of Port Clyde was named secretary.



Capt. Thomas Watkinson (right) loading lobster traps aboard his lobster boat "Sea King" at P. K. Reed & Son dock, Owls Head, Me.

With the addition of a new dragger and the installation of new freezing equipment, increased operations are evident at F. J. O'Hara & Sons, Inc. Established in 1940 by the late Francis J. O'Hara, Jr., this Rockland producing and processing firm is managed by Francis E. Donahue, and employs 100 workers. Sales manager is Maurice J. Boyle who joined O'Hara a year ago, with a 30-year background in fish business at Boston and New Bedford.

Two new, large size Amerio plate freezers have been installed in a 100' x 15' addition to the freezing plant. They will handle 4500 lbs. of fish in each 3-hour cycle, or 30,000 lbs. per day, which doubles the plant's freezing capacity. Fish storage capacity is ¾ million lbs., and Milton S. Clark is in charge of freezing and storage.

The plant's fish cutting room has been extended to provide smoother operation for the processing of ocean perch fillets, in which the firm specializes. Colon A. Tinker is in charge of production.

With the recent purchase of the former 96' Boston steel dragger *Brighton*, the O'Hara fleet totals three vessels, all engaged in redfishing. Capt. Galen Arey skippers the *Araho*, Capt. Toiva Tarvainen commands the *John J.*

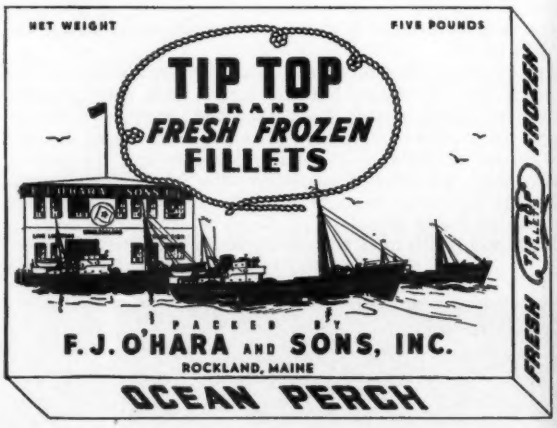
Francis E. Donahue, left, general manager; Maurice J. Boyle, sales manager, F. J. O'Hara & Sons, Inc., Rockland, Me., and the firm's redfish dragger "Araho", Capt. Toiva Tarvainen, at processing plant.

Helping to Build a Better Rockland —

O'HARA Expands Facilities for Fish Freezing and Packing

The installation of two large new plate freezers has doubled our freezing capacity. This means we can handle more production from boats landing at Rockland, and can supply consumers with products of highest quality.

The finest facilities for docking, unloading, icing and fueling are available at our modern processing plant.



We Specialize in Quick Frozen Ocean Perch Fillets

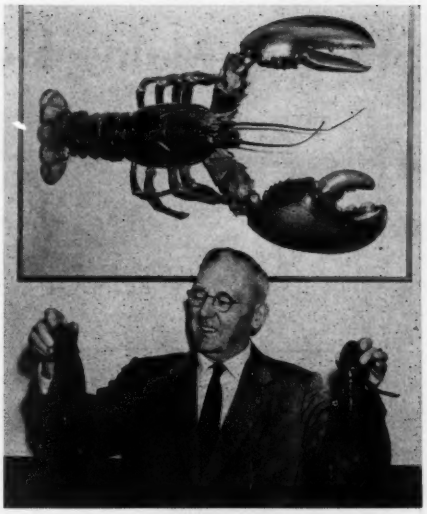
Completely equipped to handle private label accounts

F. J. O'HARA & SONS, INC.

Producers and Distributors of Fresh and Frozen Seafood

Tillson Avenue **ROCKLAND, MAINE** **Lyric 4-4444**

◀ Capt. Sherman Lord, left, skipper of the Holmes Packing Co. sardine carrier "Jacob Pike"; and Kermit St. Peter, manager of the Holmes canning plant at Rockland, Me.



President of this year's Maine Seafoods Festival at Rockland is Harold W. Look, Sr., shown holding a sample of the two one-pound lobsters that will be served to Festival guests. Mounted on the wall is a 28-lb. lobster caught on Georges Shoals. ▶

Nagle, and Capt. Neal Farrell is in charge of the *Brighton*. Frank E. Ross, Sr., is port captain of the O'Hara fleet.

The Company has docking space on three sides of its plant and is a distributor of Texaco marine oil products. Ice making facilities, in charge of Bion Whitney, produce 125 tons per day, and there is ice storage space for 500 tons.

An affiliated concern, F. J. O'Hara Trawling Co., in charge of Russell Woodman, carries a line of fishing gear including rope, nets and American Tiger Brand wire trawl cable.

The largest fish producer in Rockland is 40-Fathom Fisheries, Inc. which owns six 145-foot steel trawlers, plus the 77′ dragger *Angie & Florence* that was acquired from Gloucester, Mass. early this year.

A wholly-owned subsidiary of National Sea Products, Ltd. of Halifax, N. S., 40-Fathom took over in February 1957 the business formerly operated by the Birdseye Division of General Foods Corp. Since that time, the trawler fleet has operated continuously, 12 months of the year, whereas the vessels previously tied up for at least three months every winter. This has given a substantial boost to Rockland's fish catch.

The Company has a fish processing plant with twelve 1500-lb capacity plate freezers. It specializes in quick frozen ocean perch fillets, employing 175 workers, and last year started processing whiting, caught by independent draggers.

40-Fathom also operates a ship repair yard, which has a large railway accommodating 1500 tons, 240 ft. length and 15 ft. draft, and a smaller one for up to 100 ft., 250 ton, 8 ft. draft vessels. Berthing space for engine installation is provided under a 55-ton stationary crane, and there are complete machine and steel shops.

Arthur N. Thurston is general manager of 40-Fathom, Charles M. Morgan is administrative assistant and marine superintendent in charge of the Trawler and Shipyard Divisions, Arthur N. Thurston, Jr. is purchasing agent, and Raymond D. Graham is manager of processing.

Trawlers operated by 40-Fathom are the *Ocean*, Capt. Gudmundar Gulauggson; *Storm*, Capt. Earl Sukeforth; *Squall*, Capt. Ronald Whiffen; *Surf*, Capt. Douglas Schwartz; *Tide*, Capt. Aiden Bishop; *Wave*, Capt Michael Maher. The vessels maintain a steady schedule, making 15 to 16 day trips, laying over 2 days between trips in summer and 3 days in winter, with a month out for refitting. Last year they made 18 to 19 trips per vessel, and the fleet's average weigh-out catch was 267,000 lbs. per trip per vessel.

The groundfish production of 10-12 Rockland draggers is handled by Feyler Fish Co., Inc. which also deals in lobster bait. The bait consists of redfish trimmings, and is distributed in the Rockland, Boothbay Harbor and Stonington areas.

Richard W. Feyler is head of the concern which was established in 1929 by his father, the late Rodney Feyler. First located at Owls Head, the elder Feyler started buying bay scallops in 1919, and was reported to be the first man to buy and ship sea scallops. Known as the "Scallop King", he followed the scallop fleet wherever boats landed catches from Georges Bank, buying at New York, New Bedford, Nantucket and Plymouth. In the early 1930's Feyler bought the catches from as many as six scallop draggers that fished from Rockland.

Five Sardine Plants

Port Clyde Packing Co. Inc., Port Clyde, uses a "raw pack" system of sardine packing, which was invented by its president, Sam Zwecker, and has since been adopted by the industry to a large extent.

In this modernly equipped plant, built by Zwecker 23 years ago, the fish are washed before and after being cut. Raw fish are packed in the cans which are placed on 25-can trays. Specially designed movable racks, holding 48 trays are wheeled into steam boxes where they remain for 30 minutes in 220-240 degree heat. After cooking, the racks are removed, and a mechanism tilts the trays to a 45 degree angle, allowing excess liquid to drain from the cans. Next step is placing cans on conveyor where they pass inspectors and go to the sealing machines where soy bean oil, olive oil, mustard sauce or tomato sauce is added and the cans are closed. A one-hour sterilization in a 240 degree retort completes the process. The trays that hold the sardine cans are sterilized after each cycle.

The Port Clyde concern owns the 83′ sardine carrier *Delca*, Capt. Clyde Peabody, which has been equipped with new Raytheon radar, and the 65′ *Nereid*, Capt. Donald Wilson.

The oldest sardine plant in Rockland, a brick structure erected in 1910, is owned by North Lubec Mfg. & Canning Co. It was built by Edward M. and Elias P. Lawrence, the latter being grandfather of Frank A. Lawrence, Jr., who is presently manager and vice president. Headquarters of the Company is at North Lubec, Me. where Moses P. Lawrence is president and Eugene L. "Roy" Bailey is secretary-treasurer. Bailey also is president of the Maine Sardine Packers Association.

The Rockland plant, of which William Mitchell has been superintendent for 11 years, operates two sardine carriers. They are the *Pauline*, Capt. William Holmes, and *Double Eagle*, Capt. Marshall Kelly; and were recently equipped with Lavoie Bat 5 radar operated with power from 1500-watt AC Kohler generating sets, sold by The Harris Co. Approximately 200 are employed at the plant.

The firm's "Eagle Brand" is the oldest in the industry, having been first used by Julius Wolff in 1878 whose Eagle Preserved Fish Co. canned the first Maine sardines at Eastport that year. Shortly thereafter Wolff became

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Richard W. Feyler, president of Feyler Fish Co., Inc., Rockland, Me.

Gilbert E. Barker, president of Independent Lobster Co., Rockland, Me.

Charles M. Morgan, marine superintendent, 40-Fathom Fisheries, Inc., Rockland.

associated with Moses Lawrence, grandfather of the present North Lubec president.

The only refrigerated sardine carrier in the industry, the *Mary Anne*, is operated by Holmes Packing Corp. at Rockland under command of Capt. Elliot Wotten. Both this vessel and the firm's *Jacob Pike*, Capt. Sherman Lord, are fast carriers and can run fish to the company's other plants at Eastport and Portland.

The Rockland factory has been owned by Holmes for 13 years and employs 210 people. Alger Pike is president of concern, Moses Pike is treasurer and general manager, and Kermit St. Peter is Rockland branch manager.

Green Island Packing Co. of Rockland also has a "raw pack" method of canning sardines, in which fish are packed in cans before cooking, rather than the conventional system of packing after the fish come from the steam boxes.

The fish are processed in a Food Machinery & Chemical Corp. cooker. Filled cans on stainless steel racks from the packers are placed on a conveyor belt which carries them into the cooker. They first enter a steam tunnel on top of the machine where they remain for 8 to 12 minutes; then they continue on an endless conveyor system which makes 4 passes that allow 30 minutes' drying time. After emerging from the cooker and dryer, the cans are conveyed to the sealing machines.

The Green Island Company started operations in 1940, with the packing of herring, mackerel and flaked fish. The present sardine plant was built in 1944, utilizing the boiler of the former Underwood sardine factory. The firm employes 140 and operates the sardine carriers *Quickstep*, Capt. Charles Hooper, and *Neptune's Bride*, Capt. Clifton Dean.

Sardines are again being packed this year by Homeport Fish Co. at Rockport, following suspension of canning last year. The Homeport plant was erected in 1945 for producing pickled alewives and herring. After receiving their first cure, the fish are shipped in 230-lb. barrels to Benson Fish Co. in Chicago for further processing and packing. The canning of sardines got underway at Rockport in 1952. Presently 75 people are employed and fish is supplied by the company's carrier *Liberty*, Capt. William Howell. Edwin E. Witham is president of both the Green Island and Homeport concerns, while Clayton R. Witham is secretary.

Many Lobster Dealers

A man who has had one of the longest and most active careers in the lobster business is Harold W. Look, Sr., who started out as a lobster fisherman 55 years ago, later becoming a lobster smack skipper and lobster pound operator. In 1920 he established the lobster business he still heads at Rockland. He pioneered the use of lobster tanks with circulating sea water in Rockland, and operates a pound at Port Clyde. Look has made a scientific study of lobster propagation and has actively campaigned for legislation that would promote the best interests of the entire lobster industry.

Stepped-up activity is planned in the fish business of Independent Lobster Co., Rockland, which also has extensive operations with lobsters and clams.

Already buying fish from several small boats, the firm plans to extend its dock, dredge to accommodate larger craft and build a fish holding room.

Gilbert E. Barker is president of Independent Lobster, which has 30,000 lbs. tank capacity for lobsters at Rockland, has a buying station and wharf on Spruce Head Island, and plans to add a lobster pound.

The firm pioneered in setting up inland lobster tanks with artificial sea water, and operates such a plant with 8,000 lb. capacity for wholesale and retail trade at Springfield, Mass. It is prepared to provide technical advice on the installation of artificial salt water systems.

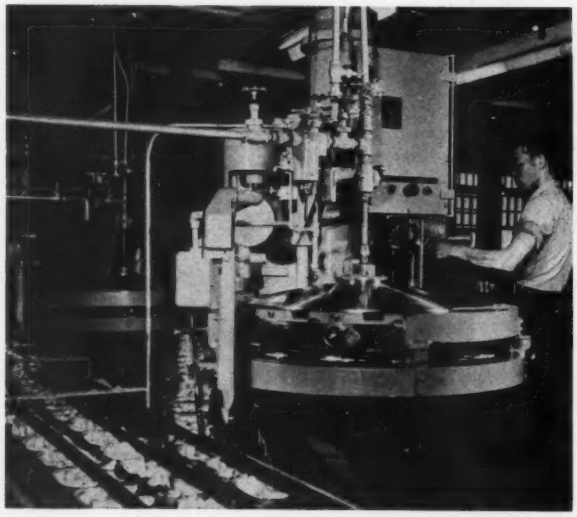
Organized 13 years ago and at its present location for 5 years, Independent Lobster owns three boats, and operates four trucks for store trade delivery throughout New England. The firm handles Gulf Oil marine products and RPM Delo lubricating oil, and carries lobster trap stock. Barker also owns Bay Shellfish Co., managed by Ernest Watling, which has certified clam shucking house.

An expansion program is underway at Spruce Head Lobster Corp., Spruce Head, where a 30' x 85' addition will double tank capacity to 50,000 lbs. The original plant was built in 1947 when Company president Harold K. Sim-

Sardine carrier "Neptune's Bride" at plant of her owner, Green Island Packing Co., Rockland, Me. She is skippered by Capt. Clifton Dean. Alongside is the 26' lobster boat "Jennie W." owned by Elmer and Eugene Witham. At end of dock is Green Island's carrier "Quickstep II", skippered by Capt. Charles Hooper.

SARDINES ARE BIG BUSINESS IN KNOX COUNTY

Five Modern Plants at Rockland, Rockport and Port Clyde Pack a Big Share of Maine's 2,225,000 Case Annual Production of This Popular Downeast Seafood.



Each of these plants along with 30 others in the State now operate under an official

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mons took his brother's Sim's Lobster Co. in Rockland.

A unique feature of the Spruce Head concern is the location of a 50,000-lb. capacity lobster pound adjacent to its packing plant. The company has another pound at Friendship, said to be the largest one on the coast, which will hold 500,000 lbs. of lobsters. Spruce Head also seines herring from a sardine weir near its plant. A York ice machine provides 4 tons of flake ice per day.

The firm operates East Coast Lobster Pools, Inc. at West Peabody, Mass. where tanks with artificial salt water hold 10,000 lbs. of lobsters.

Occupying the site of an old granite quarry pier in St. George is the lobster shipping plant of Atwood Bros. Inc. Built in 1950 after fire destroyed their original Boston quarters, the building has tank capacity for 100,000 lbs. of lobsters.

The Atwood business is a family enterprise run by two brothers and their two sisters. Marston Atwood is president, George W. is vice president, Mrs. Virginia Larson is treasurer and Mrs. Kathleen Albano is clerk. The business was established in 1927.

Four trucks are operated by the firm which is housed in a 60' x 110' cement block building. A York ice machine produces 4 tons of flake ice daily, and a steam boiler cooks 500 lbs. of lobster every 30 minutes. Two pumps circulate 2000 gals. of water per minute in the lobster tanks.

Rackliff & Witham Lobster Co. has 35,000 lb. tank capacity at its Rockland plant which was built in 1944. The business was founded by Elmer R. Witham and Roland S. Rackliff in 1925. James M. Pease, who joined the firm in 1928, is president; Nathan L. Witham, brother of Elmer, is vice-president and Mrs. Ethel Perry, daughter of Rackliff, is treasurer.

The company has lobster pounds at Tenants Harbor and Vinalhaven, and operates the 50' lobster smack *Bajupa*, of which Capt. Carlton Allen is skipper. Wall rope, Pettit paint and Mobil gas are handled.

Elmer Witham, 76-year-old retired head of the company, is still active and presently supervising the construction of a lobster pound for his son-in-law, Thomas Watkinson at Owls Head.

Eighty-five year old A. C. McLoon is dean of the Rockland lobster dealers, having entered the business soon after the turn of the century. His A. C. McLoon & Co., which is distributor of Shell Oil products, was a pioneer in selling gasoline and oil to fishing communities in the Penobscot Bay area. The firm operates a marine supply store, managed by L. W. Bosse, which is distributor of New Bedford cordage and handles lobster trap stock.

The lobster business is conducted under the name of McLoon Lobster Co., which has two smacks: the 77' *A. C. McLoon*, Capt. Sidney Sprague, which carries 50,000 lbs; and *Adelle McLoon*, based at Frenchboro, the only well-type smack still in operation. The Company operates four lobster pounds, two at Birch Harbor and two at Hewetts Island.

John H. McLoon, son of "AC" is vice president and gen-

Sam Zwecker, president, Port Clyde Packing Co., Inc., Port Clyde, Me., watching sardines pass final inspection on way to sealing machines.

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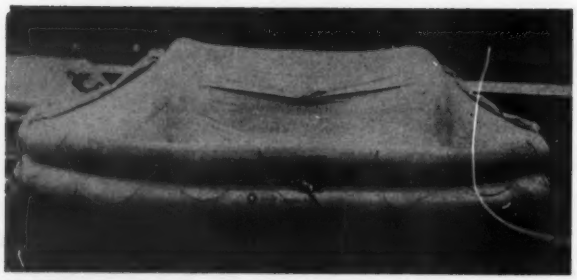

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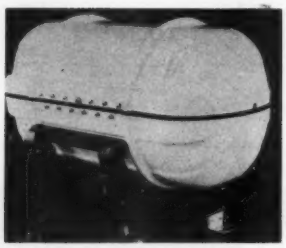

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Inventory at Boston, Portland, and New Bedford

eral manager of the McLoon interests, while Donald Leach is treasurer. Leach also is manager of American Lobster Co. which is purchasing agent for McLoon Lobster Co.

Another lobster plant in Rockland is operated by William C. Burge, who came to Rockland in 1951 to buy lobsters, and set up his present shipping plant in 1955. His tanks hold 15,000 lbs., and he has a buying station at Matinicus Island.

Burge has a tank truck used for transporting lobsters in sea water, which has run to points in New York, Illinois, Florida and Alabama.

Among other Rockland lobster dealers are Thorndike & Hix Lobster Co. of which B. B. Smith is president and treasurer; and Regal Lobster Co., Inc. of which Morris Helioff is president. The Company was established in 1951 and was located at Camden from 1952-5.

Maine Coast Seafood Corp. of Rockport has 125,000 lbs. lobster tank capacity. Maynard Graffam is president of the concern which was established in 1943, while George James is treasurer. The company specializes in mail order shipments of lobsters, and maintains a shipping plant at 85 Commercial Wharf, Boston, Mass.

Industrial Fish Production

Marine Colloids, Inc. is adding new buildings and equipment to its Rockland facilities, which will double its capacity for processing Irish moss and kelp.

The concern represents a consolidation early this year of the Algin Corp. of Rockland and Seaplant Corp. of New Bedford, Mass., where operations will continue. The Algin plant was established at Rockland in 1937, and headquarters of the concern are in New York City.

P. J. Pellicani is vice-president in charge of production at Rockland, V. C. LeGloahec is vice-president in charge of research and development, and N. R. Pellicani, who was formerly manager of Kraft Foods seaweed operations at South Portland, is in charge of manufacturing.

Raw material for the Marine Colloids plant comes from the Penobscot Bay area as well as Nova Scotia and Prince Edward Island. The Irish moss and kelp are raked by fishermen in dories and then dried for shipment to the plant in bales. A single fisherman produces 600 to 1200 lbs. of seaweed (wet weight) per day. The gathering season extends from May to October and the plant stores sufficient raw material for year 'round operation.

The processing of seaweed involves the following steps: (1) raw material is cleaned to remove sand (2) placed in water and given various chemical treatments (3) cooked in hot water (4) filtered to remove insoluble impurities (5) water is evaporated. The residue from these operations represents the extract which is sold under the Gelcarin and Viscarin trade names. The major use of the

The "Surf", one of six 145' steel trawlers owned by 40-Fathom Fisheries, Inc., Rockland, Me. Her skipper is Douglas Schwartz.

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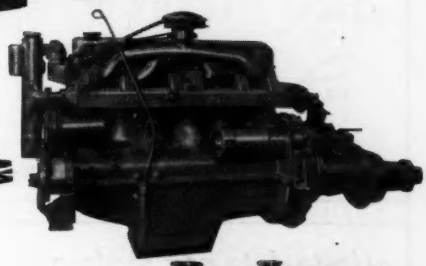

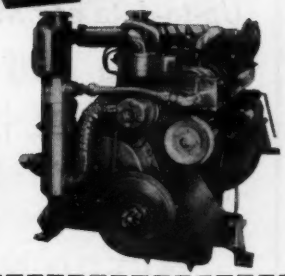

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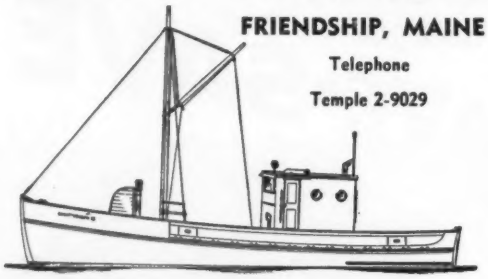

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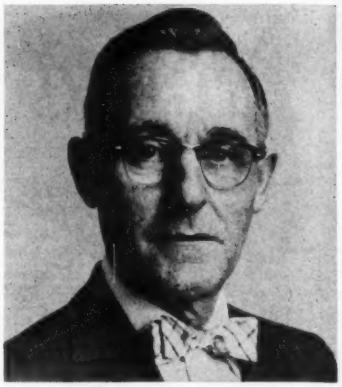

Leslie Dyer of Vinalhaven, Me., reelected president and executive secretary of the Maine Lobstermen's Association. He also is a vice-president of the Maine Seafoods Festival committee in charge of food serving.

product is as a stabilizer in the manufacture of ice cream. It also is used as a stabilizer in chocolate milk, tooth paste and pharmaceutical preparations.

With the completion of the plant expansion, 60 additional workers will be added to the present 80-person payroll. The firm's present annual consumption of 10-15 million pounds (wet weight) of seaweed will jump to 20-30 million pounds.

Maine Sea Products Corp., which is affiliated with Maine Marine Products Inc. of Portland, operates a plant at Rockland. Herring, trash fish and fish waste are manufactured into fish meal, oil and solubles, used largely as ingredients in poultry feeds. George Hamalainen is manager of the plant which started operation in 1941. The firm owns the *Sachem*, Capt. Don Rogers, which is one of the oldest carriers on the coast, having been built in 1904.

A new Rockland industry, Seapro, Inc., which will manufacture pearl essence from whole herring was scheduled to commence operations this month. Donald G. Wilson, formerly with B. H. Wilson Fisheries, Eastport, Me., is president of the firm.

Two new buildings, in addition to a boiler room, have been erected to house the processing equipment. Fish will be supplied by outside carriers, and the residue from the pearl extraction will be converted to fish meal and oil.

A large buyer of herring scales at Rockland is Mearl Corp. which also ships whole herring to its Eastport, Me. plant. Rockland facilities comprise equipment for extracting pearl essence from the fish scales.

A focal point for fishing vessel business transactions is the Rockland waterfront accounting office of Mrs. Elizabeth R. Seavey. Since 1943, she has made trip settlements and handled bookkeeping for the independent draggers landing at Rockland.

The U.S. Fish & Wildlife Service, Branch of Commercial Fisheries, maintains an office at Rockland. Richard Barnard is in charge of statistics, and Charles Philbrook

Left to right, Me. Dept. of Agriculture Inspector Everett McLaughlin; William Mitchell, plant supt. at North Lubec Mfg. & Canning Co., Rockland, Me.; Frank Lawrence, manager and vice-president.

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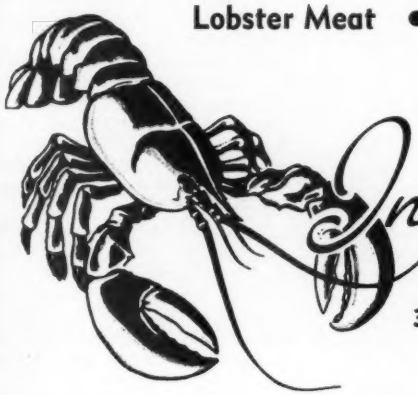

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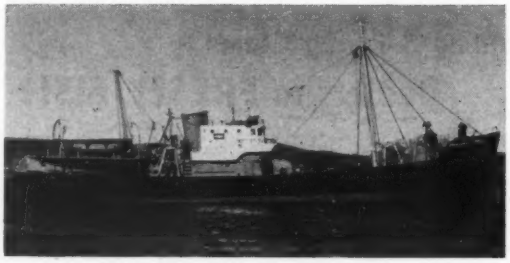

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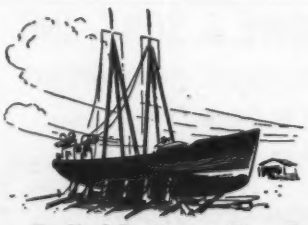

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handles the biology section. Louis Cates, statistician for the Maine Department of Sea & Shore Fisheries, works out of the Fish & Wildlife office.

One of the largest fishing operators in the area is Capt. Hugo Lehtinen of Tenants Harbor who owns four boats and operates three planes for spotting herring.

All of his boats are 45' in length and include the stop seiners *Jerry Hall* and *Glenn Hall*, the pump boat *Ronnie Hall* and the whiting dragger *Susan L.*

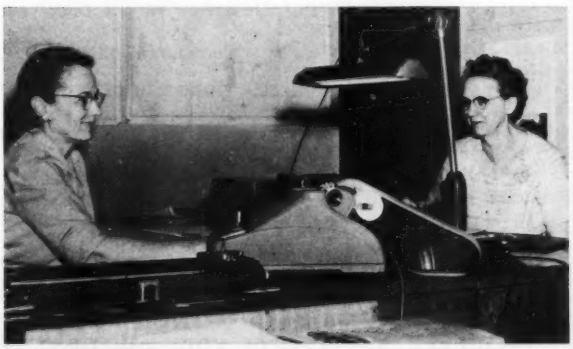
The *Glenn Hall* was recently repowered with a 100 hp. Osco 6DF Diesel with 2.5:1 Paragon hydraulic reduction gear, sold by Robinhood Marina, Inc. The *Susan L.* has been repowered with a new 4-51 General Motors Diesel, sold by Hubbs Engine Co.

P. K. Reed & Son operates a lobster, fish and scallop business at Owls Head; Theodore Allard has a wholesale lobster business at Spruce Head.

Tenants Harbor Fish Co., operated by Allison Morris at Tenants Harbor handles lobsters and fish; and Art's Lobsters buys lobsters.

There are nearly 100 lobster boats and 5 draggers operating from Port Clyde. Frank Perry is manager of Port Clyde Fish Co. which handles lobsters and fish. Among lobster buyers are Ralph Simmons and Seacoast Lobster Co.

Burnham & Morrill operates a fish plant at Vinalhaven



Mrs. Elizabeth R. Seavey, left, and her assistant, Mrs. Dorothy R. Christoffersen, who handle trip settlements for the independent fishing vessels at Rockland, Me.

which produces fish flakes and some of the salt cod used at the firm's Portland cannery. Bickford Fisheries has a fresh and salt fish business, and there are four lobster buyers: Bennett Bros., Bickford Lobster Co., Joseph C. Nelson and Wallace Young.

One of the largest lobster ports on the Maine coast is Friendship, which is claimed to have more lobster traps than any other place. It is the center of operation for over 75 boats, divided 50-50 between inboard and outboard power, and for four lobster buyers.

The buyers include one-time dragger owner, Lew J. Wallace, who operates Fishermen's Wharf with the assistance of Albert Roberts; Sumner P. Whitney, who formerly managed a Rockland fish plant; Ralph Simmons, who has the smack *Mayflower*, and newcomer Arnold Levensaler, of Friendship Lobster Co.

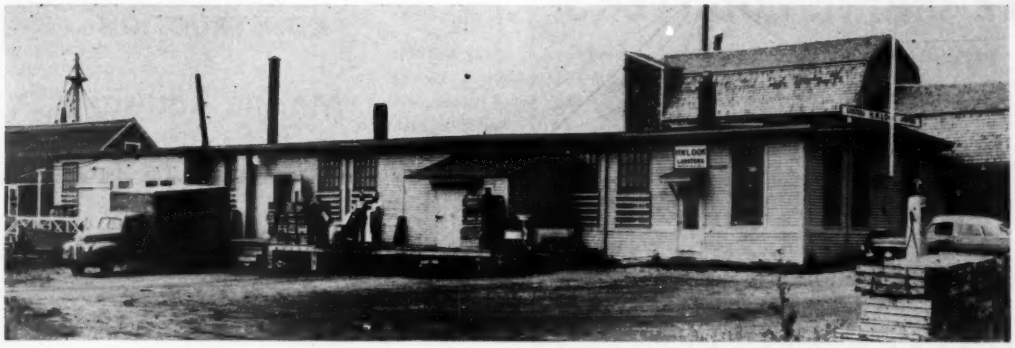
A 33' lobster boat for Capt. Oram Simpson of Tenants Harbor was scheduled to be launched this month by Anderson Boat Works, Thomaston, of which Thomas Anderson is proprietor.

Designed by Newell McLain, Jr., the boat has a 10' 6" beam, 3' draft and is constructed of 1⅜ x 2⅜ oak frames and 1" cedar planking with Everdur fastenings. The boat has a watertight cockpit, and a 7" oak lock strake extends full length under deck. The cabin trunk and standing top are made of plywood with Fiberglass coating.

Power for the new craft, which will fish out of Criehaven, will be supplied by a 100 hp., 6DF Osco Diesel with 2:1 Paragon hydraulic reduction gear. Sold by Robinhood Marina, Inc., the engine will swing a 22 x 23, 5-blade Columbian propeller, on a 1½" Tobin Bronze shaft.

Newbert & Wallace of Thomaston is completing a 32'

LOOK'S *Luscious* LOBSTERS



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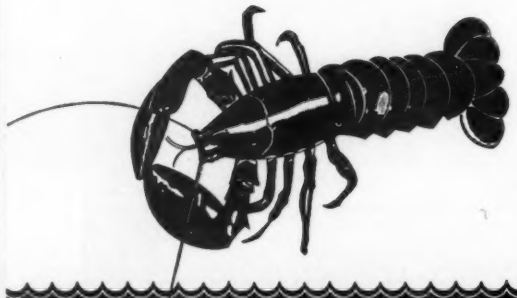

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THOMASTON, MAINE

lobster boat for Capt. Linus Dodge of Block Island, R. I. She will be equipped with Chrysler Crown engine with 2:1 reduction gear, Twin Disc power take-off and Sonar depth recorder.

A 23′ lobster boat is being built for Capt. Webb Clark of Block Island which will have a 22 hp. Palmer with 2:1 Paragon gear. Owned by Roy Wallace and Herbert Newbert, the yard was established in 1940, and has built numerous draggers, sardine carriers, lobster and party fishing boats.

Lash Bros. Boatyard of Friendship is completing a 45′ dragger for Milligan & Hansen of Lake Grove, N. Y., to be powered by a 165 hp. Graymarine Diesel. The yard recently completed a 32′ lobster boat for Capt. Wayne Havener and a 30-footer for Capt. Alfred Wotton. Both boats fish from Friendship and have Model 150 Flagship engines with 1.5:1 Paragon hydraulic reduction gears from Harbor Supply Oil Co.

Owned by Winfield and Douglas Lash, the business has been in operation 15 years, occupying the site of the old W. S. Carter shipyard.

Naval architect Geerd N. Hendel of Camden has done extensive work in designing commercial fishing and pleasure craft. He has been particularly active in developing new types of construction, utilizing aluminum, steel and wood, with particular emphasis on aluminum for superstructures.

Knox Marine Exchange of Camden, operated by Duane Doolittle, was established by the late John Bird, over 30 years ago. The firm provides brokerage service for all types of boats.

Leadbetter's at Camden is Penobscot Bay dealer for Palmer engines. Established 20 years ago, the business is owned by Gilbert Leadbetter who has machine shop facilities and handles Mercury outboards. A. L. Anderson of Camden handles Graymarine engines and Johnson Outboard motors.

Makinen Bros. Boatyard of South Thomaston is building

Serving the Fishing Industry
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MAINE SEA PRODUCTS
CORPORATION
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specializing in
FISHING BOAT REPAIR
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Barrington, N. S., Tel. 21-12

a 34' party fishing boat for Neal Barberio of Brooklyn, N. Y., which will be powered with a Model 220 Flagship engine with 1.5:1 Paragon hydraulic reduction gear and Crowell dual hydraulic steering.

The yard is building a 38' lobster boat for Ralph Post of Rockland, and has repowered Ralph Colby's 32' lobster boat of Spruce Head with a new Model 150 Flagship engine with 2:1 Paragon hydraulic gear.

Boat building, repairing and outfitting facilities are provided by Rockland Boat Shop in Rockland. The business is owned by Sulo Gronros, whose recently retired father Axel Gronros established the firm in 1929.

The yard has built vessels up to 75' and specializes in lobster and party fishing craft. Two railways can haul boats up to 42' and there is a ground-out repair dock.

Gronros erected a new supply store two years ago, which handles Tubbs and American brand cordage, Linen Thread nets and twines, Brownell Nylon twines, International paint.

Hunter Machine Co. has been in the same location for 45 years. The firm is owned by Roy Hunter who was associated with his father, Frank Hunter, during the first ten years' operation of the firm at Rockland.

Hunter has a machine shop and handles Chrysler, General Motors, Flagship and Allis-Chalmers marine engines. He also has a line of marine hardware and fishing gear, including Plymouth rope, Hazard wire rope, Pettit paint, Linen Thread nets, Columbian Bronze propellers and Surrette batteries.

Among the trucking concerns serving the Rockland area with specialized seafood transportation are Boston & Rockland Transportation Co. and Juliano Bros., Inc.

Sherwood "Sparky" Upham is president of Boston & Rockland and Frank L. Kaler is manager. The firm operates 42 tractors, 56 trailers and 18 straight trucks. They haul lobsters, fresh and frozen fish, sardine cans and marine equipment, and provide direct service to Nova Scotia via the "Bluenose" ferry.

Juliano has 40 units of equipment and is operated by four brothers—James Juliano, president; Jerry, vice-president; Anthony, treasurer; Vincent, secretary. Established in 1932, the Company furnishes common carrier service between Nova Scotia and Pennsylvania. In addition to carrying market fish and lobsters, the Company has 35,000 lb. capacity covered gondola trailers for transporting bulk fish and waste. A recent development is the transporting of herring from production points to sardine canneries, which allows moving the fish over longer distances and more quickly than possible with carrier boats.

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New GM Diesel Series 53 now in stock at Hubbs Engine Co. Dependable Diesel power for small work boats. 40 to 120 hp.

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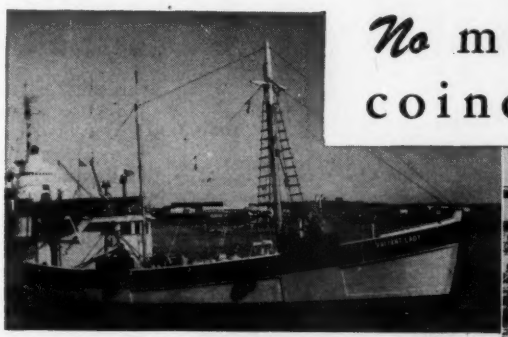
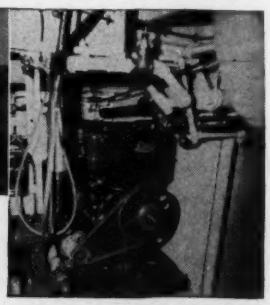


No mere coincidence!



ANOTHER Lister for New England's Fishing Fleet

Above left: "Valiant Lady": Capt. & Mrs. Antonio Vasquez, Fairhaven, Mass., owners.
Above: "Valiant Lady's" Lister SL2 air-cooled diesel auxiliary.

VALIANT LADY, new Lister-powered dragger, continues Lister's exceptional record of providing dependable, economical auxiliary power for more than ¾ of New England's fishing vessels. Her air-cooled Lister Model SL2, 8½ HP @ 1800 RPM, furnished by Diesel Engine Sales & Engineering Corp. of Boston, provides power for the auxiliary unit, driving a 5 KW Kurz & Root Generator, Marine Products pump and a bronze winch head on the deck side of the engine trunk for taking out fish.

Compact, space-saving, air-cooled Listers start immediately at temperatures from sub-zero to 130°F.; provide auxiliary power for all vessels, propulsion for medium sized boats. 3½ to 30 BHP., 1, 2 & 3 cylinders.

Distributorships available in some areas

LISTER-BLACKSTONE, Inc.

42-32 21st Street, Long Island City 1, N. Y. Tel.: STillwell 6-8202
In Canada: Canadian Lister-Blackstone, Ltd., 1921 Eglinton Ave. E., Toronto 13, Ont.

EQUIPMENT and SUPPLY NEWS

New Stroudsburg Adaptable Hoist

Stroudsburg Engine Works, Inc., 62 North 3rd St., Stroudsburg, Pa., has announced the new 516T series, triple-drum hoists, adaptable for single or double-rig operation. The new units have a hoisting capacity of 2,500 pounds, single line. Main drums will hold 1,650′ of 7/16″ cable or 1,300′ of ½″ cable. Try net drums hold 1,100′ of 7/16″ cable or 850′ of ½″ cable.

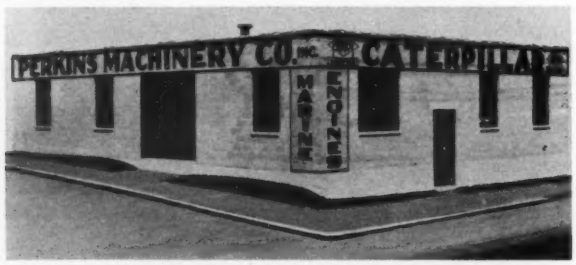
A 516T series feature is thrust arrangement, utilizing ball thrust bearings with bronze thrust screws that has positive friction pull-off release. The pinon shaft is equipped with sealed, double-row, radial thrust roller bearings for increased drive efficiency.

New Raytheon Gas Detector

An automatic gas detector, announced by Raytheon Co., 138 River St., Waltham, Mass., employs a platinum filament emiting infra-red rays when gas fumes are present. "Black Light" shines upon a solar cell shielded to see only the platinum wire.

The silicon solar cell senses infra-red energy given off by the platinum wire when activated by gas fumes. Infra-red energy is converted to an electrical signal by the solar cell. Amplified by a transistor, the signal triggers a flashing red light on the indicator unit.

A transistorized circuit amplifies the signals so that only a little power is required to run it. The detector may be tested by turning a knob at the instrument panel.



New location for Perkins Machinery Co. Inc., New Bedford, Mass., where service and replacement parts for Caterpillar marine engines is provided for Mass. and R. I.

Perkins Marine Branch Moves

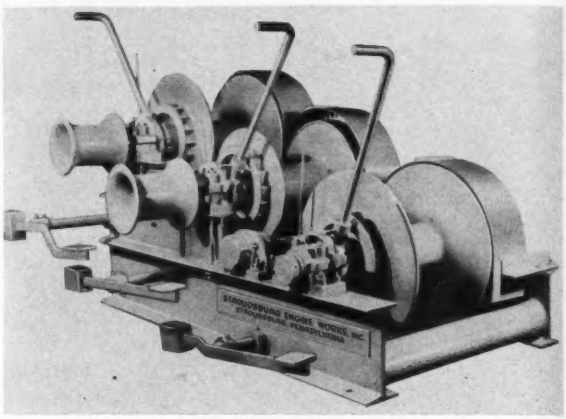
Perkins Machinery Co., Inc., Caterpillar marine engine dealers in Massachusetts and Rhode Island, have moved their marine branch to a new location at 126 Front Street, New Bedford, Mass. From this location, Perkins will provide service for New Bedford, Fairhaven, Provincetown, Mass. and Newport, Rhode Island.

Sidney K. Rideout, marine engine specialist, will manage the marine branch store, with William Casey and Joseph Vieira as service men, and Raymond Chandanais to assist in expediting parts purchases.

Ingersoll-Rand Air Starter Bulletin

Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y., has prepared a 24 page bulletin on air starting motors. It contains case histories, information on proper selection, advantages, and detailed specifications and mounting-dimension diagrams for the complete line, including two new models, size 3BM and 10BM.

Drawings show piping arrangements for each size and suggested hook-up. A nine page section lists the size and number model of the air starting motor required for most models of Diesel, gasoline, natural gas, or dual-fuel engines of 29 leading manufacturers.



New Stroudsburg Engine Works Inc. 516T, triple-drum hoist adaptable for single or double-rig use.

Chrysler Adds Deutz Diesel Line

The Marine and Industrial Engine Division of Chrysler Corporation has added a complete line of Deutz Diesel engines to its marine series, according to Arthur S. Hudson, division president. Hudson stated that after intensive investigation, the Detroit, Mich., firm has signed an agreement with Klockner-Humboldt-Deutz of Germany. The German company is one of the largest manufacturers of Diesel engines in the world. Its subsidiary in the U. S. is the United States Diesel Energy Corporation in New York.

Duetz specializes in air-cooled engines ranging from nine to 300 horsepower. Sixteen basic models are included in the group. This air-cooled line claims to deliver full-rated power in 30 seconds to one minute after a cold start. Rapid warm up reduces cylinder wall and piston ring wear, and crankcase oil dilution. The turbulence type combustion chamber and high temperatures maintained in them are designed to make engines relatively insensitive to fuel type.

Individual cylinders and head are to permit rapid and inexpensive service and repair. The interchangeability of parts, due to Deutz design, should provide excellent service and maintenance programs, Hudson said. Chrysler Engine centers will carry complete parts inventory.

Tuff epoxy paints are manufactured by Glass Plastics Corp., consist of equal parts paint and curing agent. They are available in ten colors.

Glass Plastics Epoxy Paints

Tuff epoxy paints, introduced by Glass Plastics Corp., 1605 W. Elizabeth Ave., Linden, N. J., early this year, are available in ten colors, black, and white. Tuff epoxy paint is a two-part system, consisting of one part paint and one part curing agent, mixed equally on use.

According to Jan S. Irvine, president of the Glass Plastics, epoxy paints will be a leading type marine paint in the near future. Tuff paints combine adhesive properties with toughness, brilliance and long life. No primer is required for Fiberglas, metal, and old paint.

Osco Names Representatives for Maine and Gulf Coast

Ralph G. Becker, president and general manager of Robinhood Marina, Inc. of Robinhood, Maine, has been appointed factory representative in the Maine area by Osco Motors Corp. of Philadelphia. He will handle the 4DF and 6DF Marine Diesel line.

A feature of Becker's facilities is a 25-ton Travelift crane for hauling out boats up to 55 ft. in length and 16 ft. beam. There also is a 2-ton mono-rail hoist for lifting engines, located over a 15 ft. wide slip. Becker has a trailer for carrying an Osco 4DF demonstrator along the coast.

A 6DF, 100 hp. Osco Diesel with 2.5:1 Paragon hydraulic gear, swinging a 24 x 22 propeller was recently sold by Robinhood Marina for the 38' dragger *Sea Swallow*, owned by Lawrence Durfee of Boothbay Harbor, Me.

Robinhood carries a line of marine supplies, including International paint, Columbian rope and Johnson outboards, and is equipped to handle steel work.

Chester Holley has been named to represent Osco Motors in the Louisiana-Texas area. Mr. Holley, who has had many years' association with the marine trade, has headquarters at 1222 Amelia St., New Orleans.

Ralph G. Becker, left, of Robinhood, Me. and Chester Holley of New Orleans, La., factory representatives for Osco Motors Corp.

Chamberlain New Gray Marine President

P. C. Chamberlain

The board of directors of Gray Marine Motor Co., manufacturers of marine engines, has named executive vice president and general sales manager P. C. Chamberlain as president. John W. Mulford, president for many years is chairman of the board. Richard G. Hanna executive vice president and assistant general manager, becomes executive vice president and general manager. Chamberlain, Hanna, and Wilbur I. Ware, treasurer, were named to the board of directors. Orion W. Meiselbach and R. H. Mitten continue as vice presidents. William G. Raven is secretary and assistant treasurer. Angela Rossi is assistant secretary.

Harbormaster Power, Steering Catalog

The Murray & Tregurtha, Inc., (80 Hancock St., Quincy 71, Mass.) 12 page catalog 596 gives latest information on heavy-duty, marine power and steering packages. Included are features of design and construction, specifications of the models ranging from 40 to 500 hp. gas or Diesel, and photos of Harbormasters in action.

Chrysler Has Iron-Like Bonding Agent

A new iron-like adhesive and sealer, designed to repair anything from a broken chair to a cracked engine block, has been announced by Chrysler Corp., Cycleweld Chemical Products Div. Cycleweld Liquid Iron is a putty-like, synthetic plastic that sets up into a substance like iron a few hours after it is mixed with a liquid hardener. After hardening, it may be ground, sanded, filed or drilled in the same manner as iron.

According to reports, the bond will retain its strength under heat up to 300 degrees and cold down to 0 degrees. Liquid Iron comes in a two-unit package containing a jar of putty-like base and a vial of liquid hardener. Before hardener is mixed in, the base is an inert material that may be stored indefinitely without hardening.

Pneumatic Clutches on New Western Gear

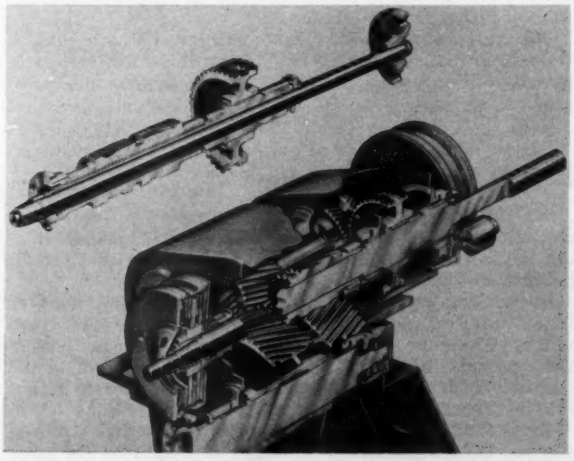
After five years of research and development, Western Gear Corp., P .O. Box 126, Belmont, Calif., is now producing a line of PCMR marine reverse-reduction gears utilizing pneumatic clutches. They are designed for Diesel propulsion requirements of 800 to 20,000 hp.

Clutches on the new models are located on the outside of the gear and supported by that unit. They are located on the forward and aft ends. This arrangement is to allow wearing clutch parts to be inspected or replaced more easily. They have minimum restrictions of air flow to clutches; positive alignment between driven and driving elements; use of Western Gear's quill shaft drive to eliminate flexible coupling between engine and drive; individual roto-seal elements for introduction of air into clutches coupled with interlock valves to insure separation of air pressure in the two clutches.

Use of either quill shaft or solid shaft drive with conventional coupling simplifies engine connection. Pillow blocks, stub shafts, and similar equipment is not required to support clutches. Gear unit is supported on extension of lower housing split line flange. Gear housing alignment is through Western Gear's three-point mounting and installation system. Unit may be disassembled in ship without disturbing alignment.

Split Sleeve-type bearings are arranged for individual inspection and maintenance by removal of a few bolts and bearing cap. PCMR units are equipped with self-contained lubricating system including oil pump, oil sump, cooler, filter, and piping.

The Sea-Master PCMR is available in vertical, horizontal offset arrangements, in-line types, and multiple pinon designs to allow four engines on one unit.



Cutaway view of the Sea-Master PCMR reduction gear made by Western Gear Corp. Top view shows quill shaft construction.

PACIFIC COAST

Fish Farm System Expanding In Washington Operations

The Washington Fisheries Department believes its fish farm program is paying dividends. Chinook salmon being raised in Raab's Lagoon on Vashon Island have shown a growth of nearly half an inch a week. It has, in operation now, 1,451 acres of fresh and salt water rearing areas in which 6,426,000 salmon were raised last year. Under consideration, are lakes or brackish bays, with seven of them being given top priority.

"We expect to produce seven million salmon in the 19 projects we now have in operation," state director Milo Moore said in a discussion of the program. "Production last year gave every indication that our program can be of substantial aid in rehabilitating and expanding our salmon stocks. We are fortunate in having many fresh and salt water areas in the state which can be easily and inexpensively controlled for our use."

Most extensive of the projects are Kennedy's Lagoon on Whidbey where 861,000 chum and 100,000 Chinook are planned; Cramberry Lake with a million silvers; Capital Lake where 2,000,000 Chinook and 50,000 silver are being raised; and the Keyport Lagoon where they've started better than a million chum and will plant 100,000 silvers.

The seven high priority projects are Kendall Creek, Samish Lake and Skidmore Slough fresh water impoundments, plus Little Clam Bay, Fisherman's Bay, Hadlock Bay and Old Channel Slough on salt water.

Since the initiation of the program in 1957 the Department has developed 1,451 acres of fresh and salt water rearing areas. Survival and growth rates in these developed areas have been extremely encouraging. Chinook salmon currently being reared in a salt water lagoon on Vashon Island have shown a growth of nearly one-half inch per week.

Big Washington Sockeye Migration

Great numbers of yearling sockeye are moving down the Fraser River toward the sea, raising the possibility that 1961 may produce a record-breaking run, according to reports.

The seaward migration from the Stuart River and Quesnel Lake systems is exceeding the highest expectations, Milo Moore, a member of the International Pacific Salmon Fisheries Commission, said.

With favorable sea-survival conditions, Moore said, it is possible that the run in 1961, when these fish return to spawn, will approach 10,000,000 fish, or double the brood year run in 1957.

Seattle Landings For June

Seattle, Wash., halibut fleet landings for June 1959, totaled 5,863,100 pounds compared to 4,753,100 pounds during the same month in 1958, for an increase of 1,110,000 pounds. Halibut led with 5,848,100 pounds.

In the June otter trawl fishery, ling cod nearly doubled for a total of 209,600 pounds, leading the otter trawl fishery. Flounder rose from 500 pounds in June 1958 to 2,800 pounds this year. Rockfish showed a 56,200 pound increase with 205,700 pounds, while ocean perch gained 106,900 pounds for a total of 108,800.

Total landings for the June 1959, otter trawl landings showed 867,800 pounds for 24 trips, a drop from the same month last year when 885,500 pounds were landed in 22 trips.

Capt. Pete Andersen, center, has sold the 46-foot, California albacore troller, "Venture II" to Glen Fulton, right, of Madras, Ore. Fulton with Ed Jarvis, left, will fish the boat in Coos Bay. The boat is powered by an 80 hp. Caterpillar Diesel.

Washington Asks Japan to Buy Dogfish

Milo Moore, Washington state fisheries director, has asked Japan to accept a trial shipment of dogfish shark for Japanese consumption. Moore made the request in a telegram to H. Okuhara, director of the Japanese Fisheries Agency. Moore suggested a trial quota of 500 tons over a one-year period beginning in August.

The action followed an announcement that the Senate Interstate and Foreign Commerce Committee had approved a measure providing bounties on dogfish sharks. The bounties would be $15 a ton for carcasses and 15 cents a pound for livers. The measure was amended to institute a starfish-eradication program, asked for by East Coast fishermen.

Continuous Interior Inspection Begun By Seattle Fish Plant

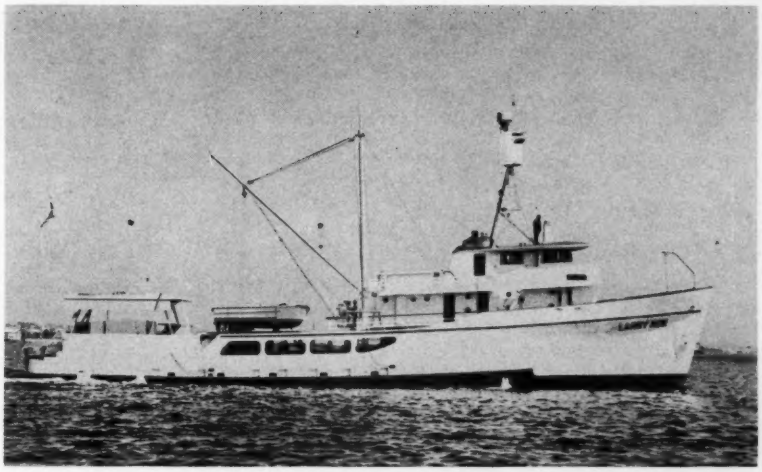
Continuous Interior Department inspection of fishery products has been started by one of the larger fish processors in Seattle. This is the first plant in the Northwest to use the voluntary continuous inspection system offered by the Bureau of Commercial Fisheries.

Products produced under the inspection may show on the label the shield bearing the U.S. Grade and the words "Packs Under Continuous Inspection of the Department of the Interior." Halibut and salmon steaks and cod fillets are being packed under inspection at the plant. Packing of frozen sword fish steaks and king crabmeat will be included later.

Inspection and grading services are available on a fee basis to processors who meet the existing standards of quality for fishery products. Grade standards are now available for halibut steaks, fish sticks, breaded frozen shrimp, and haddock fillets. Grade standards for salmon steaks, cod fillets, and frozen raw breaded fish portions will be available shortly. Inspection services are available to assure wholesomeness of the product and conformity to written specifications for fishery products not presently covered by established standards.

To Enforce Alaska Drum-Seine Ban

The Drum Seiners Association Inc., of Bellingham, Wash. has been advised that Alaska will enforce the ban against the use of drum-seines for salmon fishing, this year. The notice was given in view of reports that the ban would not be put into effect.



The "Larry Roe", 127-foot tuna vessel is the 14th in the 345-ton class produced by National Steel and Shipbuilding Corp., San Diego, Calif. Operated by National Marine Terminal, Inc., San Diego, she is powered by a Fairbanks-Morse 3838⅛ opposed piston, 960 hp. Diesel. Two auxiliaries are Caterpillar Model D342. The clipper will fish for the Westgate California Corp. and Breast-O-Chicken label.

Washington Fish Tunnel World's Longest

A fishway to be built around Castile Falls on the Klickitat River in southern Washington will have the longest fishway tunnel, in the world, according to the Department of the Interior. The 3,300 foot fishway will be located on the Yakima Indian Reservation in the Foothills of Mount Adams.

The Department of Fisheries will contact for construction, and will operate the fishway under the Columbia River Fishery Development program of the Bureau of Commercial Fisheries.

Castile Falls is a series of 11 falls presenting insurmountable barriers to upstream migrating salmon. When the fishway is completed the upper reaches of the Klickitat river will be open as spawning grounds and a fish run will be established by planting young fish in the streams and permitting the returning salmon to spawn naturally.

The fishway will be located on the west side of the river at an elevation of about 2,700 feet above sea level and give the fish an easy rise of 118 feet in its 3,300-foot length. The six by eight-foot tunnel will be drilled through solid rock and will have 118 overflow weir controls with a one-foot elevation at each successive weir. The pools between weirs will vary in length and average about 28 feet. At the upstream end of the fishway there will be a 150-foot long reinforced concrete intake structure with trash racks, gravel sluice, vertical slot water flow control unit, all covered with precast concrete slabs.

Ask More Ocean Research

An expanded program of ocean research was proposed recently by Senators Warren Magnuson of Washington and Clair Engle of California. They said Russia and several other nations are conducting ocean studies of unprecedented magnitude. They are using more and better equipped research ships than the United States.

The rehabilitation of commercial fisheries and utilization of other ocean resources were listed as objectives of more intensified investigations. The bill commended the Committee on Oceanography, composed of scientists from universities and industry, which recommended a ten-year program of research including new-ship construction, scientific training, and coordination of Government effort.

Washington Fishery Scientists Organize

Fishery scientists in northwestern Washington met to receive the first district charter to be granted by the American Institute of Fishery Research Biologists. The Institute, which was established about two years ago, includes research biologists in the United States and Canada. Dr. W. F. Thompson, former director of the Fisheries Research Institute at the University of Washington, is president of the organization.

Explaining the background of the new professional organization, a statement said: "The growth of population throughout the world is placing heavy demands upon our natural resources, including fisheries. Maintaining stocks of fish has become a critical necessity for many nations. The biological sciences must be directed to fisheries problems to answer this challenge and provide a sustained supply of fish for both the economic and recreational needs of the people."

First 1959 California Albacore Catch

The first albacore catch of the year was landed at San Pedro, California, June 19 by the vessel *El Gralo*. The fish were taken southwest of Pt. Arguello by trolling. The catch was made up of 30 albacore averaging 11-15 pounds and were sold for 25 cents a pound. This is the first time in recent years the year's first catch was made so far north. Most early catches are generally made in the vicinity of Guadalupe Island, about 350 miles south.

Fishermen Vote to Retain Pay Basis

About 500 members of the Cannery Workers and Fishermen's Union recently voted to continue a policy of demanding letters of guarantee from boat owners. These would stipulate they will be paid on the basis of $270 for yellowfin and $230 for skipjack.

California Albacore In Japan

For the sixth time, an albacore tagged off the coast of California has turned up in Japanese waters. Such continued evidence of the relationship between the two fishing grounds, is helping marine biologists in their study of the albacore life cycle. Still a mystery is the location of spawning grounds and movements of baby fish.

The latest trans-pacific recovery was tagged 150 miles south of San Diego, Calif., in July 1957. It was recaptured on long line gear 700 miles southeast of Tokyo, 19 months later. Distance covered by the fish was 4,800 miles.

C. E. Christensen

Well known west coast fisherman, C. E. "Gus" Christensen, of Harbor, Oregon, passed away last month. Christensen had been an active fisherman or connected with the industry for many years. He left Newport several years ago to manage the Winchester Bay Fish Co. at Winchester Bay, Oregon.

Big Halibut Catch in Bering Sea

A catch of halibut, 123,000 pounds, has been made in the Bering Sea by the *Allaverdy*, a fishing vessel chartered by the International Pacific Halibut Commission. The catch was made near the halibut producing area discovered by the *Polaris*, a Seattle, Washington, boat chartered by the Commission in 1956.

Salmon Group Reorganized By Oregon Interests

Astoria, Oregon representatives of the commercial fishing industry recently reorganized "Salmon For All, Inc." The group was formed to combat opposition to the industry's interests, including a recent move for a state ban on commercial fishing in all streams and estuaries over which the state has jurisdiction. All coastal streams with the exception of the Columbia River are now closed to commercial fishermen.

Salmon For All, Inc., is headed by a board of directors made up of three packers, three fishermen, and the president of the Astoria chamber of commerce as an ex officio member. It will raise limited funds from within the industry to carry out an education program on behalf of the industry and to protect salmon resources.

Members of the board of directors are Harold Thom, Rolf Ostrem, Frank Hoagland, Tom Jorgenson, Ted Jackson, Helmer Lindstrom, and George Abrahamsen the chamber of commerce president. J. H. Cellers of the Columbia River Packers Association serves as secretary-treasurer.

Columbia River Salmoning Delayed

Start of the June, Columbia River, commercial salmon fishing season was delayed two days following a joint meeting of the Oregon Fish Commission and the Washington Department of Fisheries. The meeting was held only two days before the scheduled salmon opening.

The season was delayed on the basis of biologists reports that escapement over Bonneville dam was insufficient. Biologists said only 6000 salmon crossed the dam between June 1 and June 10. Date for the closing of the gillnetting season remained July 15 as previously set.

Columbia River Escapement 50 Percent

Biologists from the Oregon Fish Commission estimated 61,000 salmon taken during the spring commercial fishing season, on the Columbia River. They listed escapement over Bonneville dam during April and May as 55,869 chinook and 4,878 jack salmon for a total of 60,747. This was based on reports from the Army engineers. Escapement was approximately 50 percent of the run the biologists estimated.

Alaska Natives Oppose Trap Bans

The village councils of Angoon and Kake, Alaska, have indicated they will proceed in the face of state opposition to operate a total of seven salmon traps in southeastern Alaska waters this year. At the same time acting governor, Hugh G. Wade, said trap sites owned by the natives have been posted with notices that any such gear operation would be in opposition of state law.

The native traps, along with all such gear, have been outlawed by the State. However, the United States Department of the Interior has exempted seven Angoon and Kake traps and four others at Metlakatla from its general ban against the gear.

Ted Benson, city councilman of Metlakatla, said all trap sites on the reservation have been posted with no trespassing signs and armed watchmen are guarding them. The watchmen have been instructed to repel any person trespassing on the federal reservation. If there is any violence, he said, it will be the fault of Governor Egan who refuses to submit the case to a court test.

Bear River Salmon Regulations Changed

Purse seines and drift nets can now be used for salmon fishing on alternate days in the Bear River section of Alaska. The change was published as an amendment to the Alaska Commercial Fisheries Regulations in the Federal Register. The change was made to accomplish a more equitable distribution of the allowable salmon catch among purse seiners and drift netters.

Would Watch Russian Aleutian Fleet

Alaskan senator, Ernest Gruening, has asked the Navy Department to keep a close watch on the fleet of Russian vessels he said is operating near the Aleutian Islands. Senator Bartlett was also alarmed by the reports of Soviet trawler activity off Cape Fairweather.

Bartlett feels if the exploratory vessel finds fish in quantity, a fleet similar to that fishing north of the Islands, will be sent to the new waters. American boats have never moved in on fishing grounds off Soviet shores, and we expect the same treatment from the Russians, he said.

Alaska Fish Landings Best of Season

Heaviest fish landings of the season were reported at southeastern Alaska ports recently with one day landings of 871,000 pounds of halibut and 128,700 pounds of salmon. Ketchikan, with 438,200 pounds of halibut had the bulk of the landings and commanded the highest price. Large halibut brought 18¾ cents.

Other halibut receipts were Petersburg, 144,300 pounds; Pelican, 120,300 pounds; Juneau, 67,000 pounds. At Wrangell, 59,000 pounds were landed and Sitka received 41,000 pounds.

Salmon landings were 47,100 pounds at Sitka; 36,200 at Ketchikan; 30,500 at Pelican and 11,100 at Wrangell. Petersburg received 3,800 pounds. Petersburg and Wrangell prices were high at 45 cents a pound for large salmon.

Alaska Asks Congress For Salmon Aid

A resolution from the Alaskan Legislature asking for 5 million dollars yearly for 15 years to help rehabilitate salmon resources, has been received by Congress. The request was presented by Alaska's secretary of state Hugh J. Wade, and Ralph J. Rivers.

Pacific Exploitation Expanding

About fifty Russian trawlers are now being operated in the Bering Sea, according to Donald McKernan, director of the Bureau of Commercial Fisheries. He said the Soviet fleet was dragging for cod and bottom fish.

Although American schooners fished the Bering Sea quite extensively at one-time the American flag is now seldom seen in those waters on fishing vessels. McKernan said that maritime nations all over the world are expanding their fishing activities and building their fleets. Many have an eye on the American market.

The Russians are now exploring the South and Central Pacific Ocean areas for tuna, the American Tunaboat Association has learned. Several Russian vessels are known to be operating in the equatorial belt which until now has been exploited almost entirely by Japanese. The Japanese longliners landed most of their catch in Samoa.

It is not known whether the Russian vessels are the advance guard of a Soviet tuna fleet or if their work is purely exploratory.

A recent report by the American Tunaboat Association predicted a big increase in Japanese Atlantic tuna activity. There are now over 50 tuna boats in the Atlantic compared with 20 last year. Tuna caught in the Atlantic is being delivered in San Pedro, Calif.

Whitefish Catches Improve

Better catches of whitefish by Great Lakes commercial fishermen are noted in recent landings in ports of Minnesota and Michigan. From the Lake Superior takes, best catches appear to be coming from western waters of the lake. A number of smaller-size fish have been taken in the eastern waters and in the north channel area of Lake Huron.

In early June, several impressive catches of lake trout were made by gillnetters from Lake Superior. Generally trout production was fair, with the better catches coming from the Isle Royal area.

Some fair catches of lake trout were taken in Apostle Islands area, while trollers were getting fish in much of the middle sections. Chub production from Lake Superior was generally fair, but came from spotty yielding grounds.

In the Green Bay area, catches of chub, perch, lake herring, and carp were good, while yields of yellow pike were generally not as productive.

On Lake Michigan, where unaccountable numbers of netters are operating, catches of chub, perch, sheepshead, were being taken in good commercial quantity. Lake herring were generally in fair production from the lake. Takes of yellow pike were lighter than the previous month.

In the Lake Huron area, good takes of perch, sheepshead and other rough species were being reported. Herring takes were generally light.

Lake Erie trap netters were coming up with carp, yellow perch, yellow pike, while other species were light. In eastern waters of Lake Erie, good catches of small whitefish were reported.

Lake Ontario commercial fishermen were getting good catches of perch, sheepshead carp, pike, herring, smelt, and yellow pike plus light catches of whitefish.

Lamprey Program Progressing

A decline in the number of sea lampreys, moving upstream to spawn in Lake Michigan and Lake Superior tributaries, has been reported by the Great Lakes Commission, Ann Arbor, Michigan.

Electric barriers to kill the lampreys are in operation on 36 U. S. streams flowing into Lake Superior and on 35 Lake Michigan tributaries.

The Commission reported the lamprey kill by the middle of May was 20,364 in Lake Superior streams. This compares to 35,239 killed in the same period last year. The kill at Lake Michigan barriers was 18,902 over last years figure of 24,071. The barriers are kept in operation until August, when the lamprey spawning runs cease.

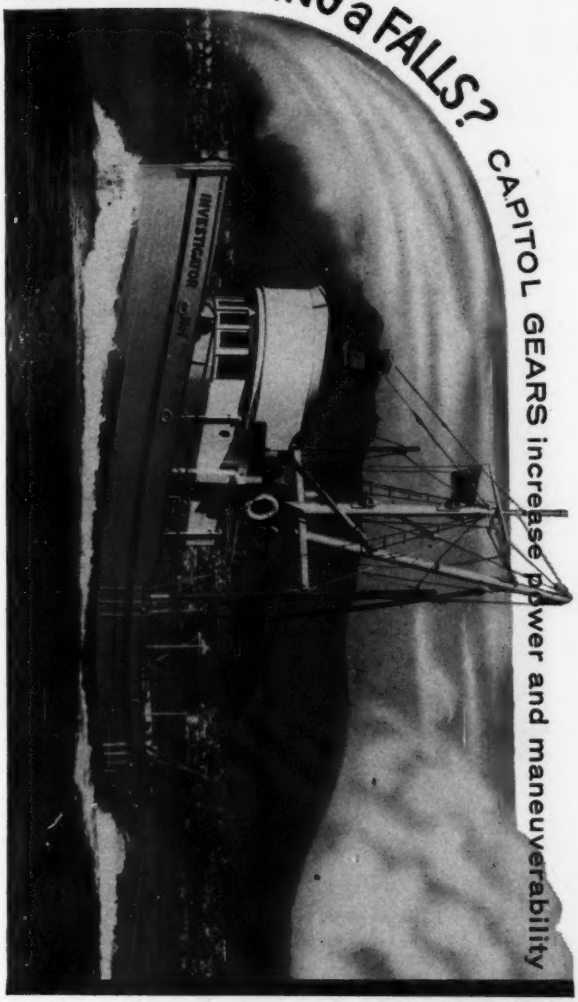
The chemical attack is well underway in Lake Superior. The spawning streams are being treated with larvicide to kill the immature lampreys before they move into the lake.

Lake Superior was selected for the first all-out attack on the eel because it still contains a population of native lake trout for natural restocking.

The Brule River, in northern Wisconsin, which has a large lamprey spawning run, was treated in mid-April. Larvicide was used in the Big Garlic River, near Marquette, Michigan, early in May. Treatment followed in four streams in the Munising, Michigan area. All these streams flow into Lake Superior.

Personnel from the Fisheries Board of Canada worked with the U. S. crews in some operations. Early in June the combined group moved across the border to begin treatment of Canadian tributaries of Lake Superior north of Sault Ste. Marie.

Feel like FIGHTING a FALLS? CAPITOL GEARS increase power and maneuverability



INVESTIGATOR No. 1 took on new "Runabout Performance" when repowered by ROLLS-ROYCE thru "The Capitol" HYC HYDRAULIC REVERSE & REDUCTION GEAR

Power and maneuverability are a must for this Fisheries Research boat. Owned by the Biological Research Station of the Department of Fisheries, she has a multitude of duties. A Rolls-Royce C8N eight cylinder engine, through "The Capitol" 4:1 reduction gear provides the power required to do an outstanding job.

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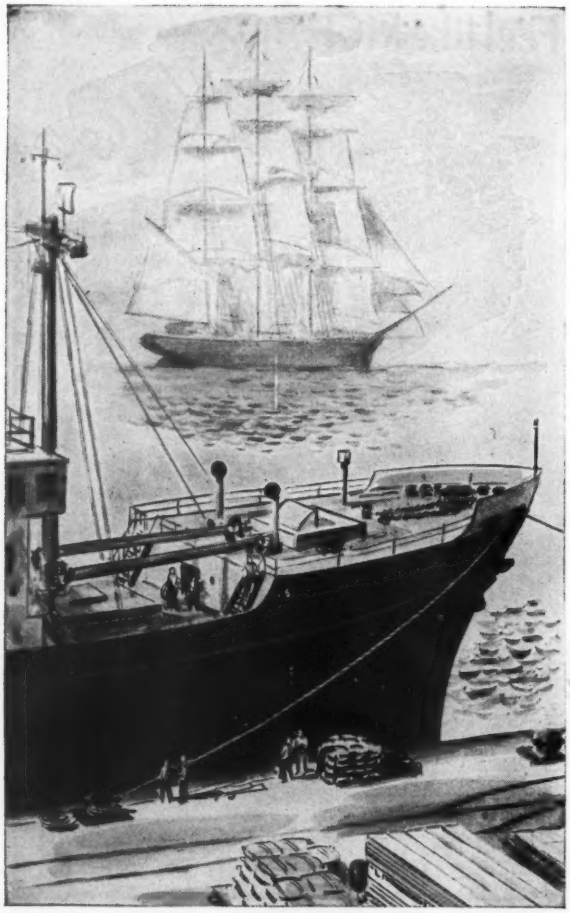

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Long-Range Management of Atlantic Grounds Discussed by International Commission

A request for serious consideration of long-range management problems was made last month to the International Commission for the Northwest Atlantic Fisheries. Elected chairman at the ninth annual meeting in Montreal, Canada, was A. J. Suomela, commissioner Fish and Wildlife Service, Washington, D.C. Others elected were George R. Clark, deputy minister of Fisheries, Ottawa, Canada as vice-president; J. H. MacKichan, Halifax, N. S., as chairman, Finance and Administration Committee; and Dr. Mario Ruivo, re-elected as chairman, Research and Statistics Committee.

J. Angus MacLean, Canadian fisheries minister said the Commission demonstrated, whatever the viewpoints in other fields, fisheries have common ground on which to ascertain truth, and act for betterment of all. He described northwest fisheries as a valuable protein food resource. He hoped needs for adequate conservation measures would be considered. Then, if signs of depletion are reported, immediate counter-measures will be ready.

Canada and United States discussed whether increased Georges Bank scalloping justifies future conservation regulations. Discussion leaders were J. A. Posgay, sea scallop research scientist, Fish and Wildlife Service, Woods Hole, Mass., and Dr. L. M. Dickie, shellfish biologist, Fisheries Research Board of Canada.

Neither was immediately concerned with a drop-off in production, but believed fishing pressure could effect future landings. The U. S. fishery took 14 million pounds from Georges Bank last year. Canada fished 2,500,000 pounds of her 1958 catch from the area.

Scallop conservation hinges on dredge-ring size, three inches in diameter. Small scallops are returned undamaged. As scallops increase 60 percent in weight yearly, scientists are considering larger rings. It would eliminate taking small scallops, providing more profitable fishing.

Loss of gillnets at sea was examined. Some nets, lost from their moorings and still buoyed, continue to catch and destroy fish. Most nets can not be recovered. Some occasionally are dragged up full of fish, after entangling in gear set on the same ground.

Icelandic delegate, Jon Jonsson, said natural fiber material is being considered for attaching floats to nylon nets. These are comparatively less rot resistant than artificial fibers. Floats attached with natural fiber would break away sooner, allowing nets to collapse.

Commission scientists may learn how Georges Bank haddock fare on Browns Bank and vice-versa, according to Dr. H. W. Graham, director, fisheries biological laboratory, Woods Hole, Mass. J. R. Clark, chief haddock biologist there, tagged 1,100 fish on either bank.

Five hundred and fifty from each were transplanted. Comparisons should show whether scrawniness of Browns haddock is genetic or environmental. Haddock on these banks never cross the dividing, 30-odd mile channel. If the transplanted fish return, scientists will have evidence they prefer their native habitat.

Among the newest fishing grounds are extensive redfish stocks in deep waters off Canada's seaboard. Major exploiters are Russia, with 109 thousand tons in 1958, and Iceland with 81 thousand. Details reveal the new stocks have placed redfish second in landings of a particular species in Convention areas.

The Commission's main function is conservation of northwest Atlantic fisheries. With no legislative power, it makes recommendations to member governments. The northwest area is divided into sub-areas, each having a panel to manage its operations.

Member nations are Canada, Denmark, France, Germany, Iceland, Italy, Norway, Portugal, Spain, United Kingdom, Soviet Union and United States. This year Poland had an observer.

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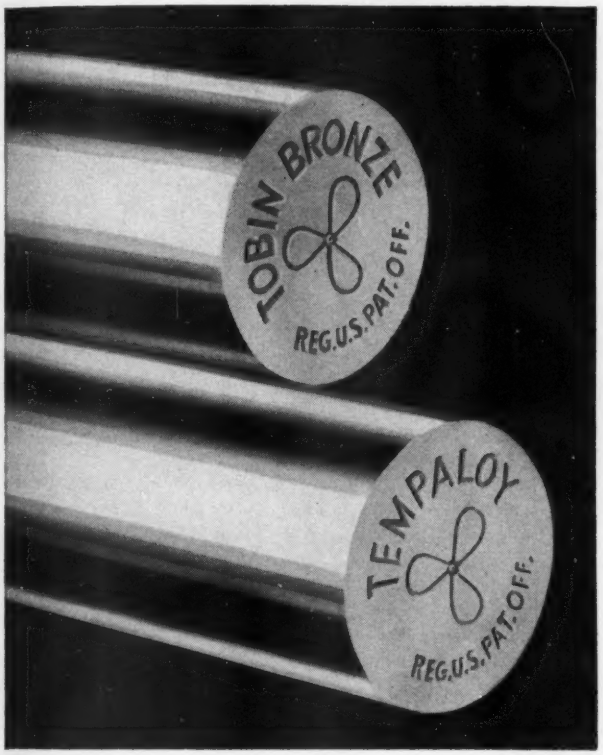

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TEMPALOY®-917, nickel-aluminum bronze shafting, was developed by The American Brass Company for uses requiring extra-high strength. Repowering with higher horsepower engines often means replacing original shafting, too. Tempaloy usually provides the needed extra strength with no increase in shaft diameter—saving costly alteration of bearing, stuffing box and housing assemblies. Features: toughness and high yield strength—high resistance to shock—excellent corrosion resistance—lighter weight—special straightening—close diameter tolerances—individually wrapped and trade-marked—reasonably priced.

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MARINE BRASS AND BRONZE

EVERDUR® FOR FASTENINGS AND FITTINGS

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Great Lakes Gillnetters

(*Continued from page 8*)

just high enough along the bottom to allow it to be flush with the tops of the fish boxes.

The only fittings normally seen on superstructures are: a mooring bit forward, grab rails just forward of the break into the pilot house, running lights atop the pilot house with a horn, and grab rails on the raised deck aft. For the most part, gillnetters have no accommodation for the fishermen.

It is difficult to maneuver from the aft steering flat as visibility directly ahead is restricted at close quarters. A hatch is often fitted in the cabin roof, permitting the helmsman to stand with his shoulders above the housetop. He steers with his feet on the wheel, the engine controls being within easy reach while in this position.

A large window is occasionally fitted in the sides of the hull to give the helmsman better visibility, but he is still blind on the opposite side. Sometimes an exhaustpipe in the housetop, further restricts visibility. Boats over 55 feet in length, usually have the pilot house amid-ships, with a separate steering flat above. This provides very good visibility, especially as the engine exhaust is aft.

With the increasing cost of fuel, the most popular engine is the diesel. Air-cooled diesels promise to become popular in the smaller perch boats, with the most economical engine between five and 25 horsepower.

Engine power varies widely in gillnetters. In the past, engines of low power were common. But now, due to their lighter weight and lower cost per horsepower, the higher powered engines are preferable. Increased horsepower makes a hull capable of higher speeds desirable. However, higher speeds require flatter and wider transoms, which necessitate fuller bows to prevent running under.

The excessive beam necessary because of the vast amount of superstructure causes the half angle of entrance to become very full if any of the standard developed plating methods are used.

Future Lakes Developments

There are two possibilities for future development of Great Lakes fishing vessels. First is the one-man perch boat, with a hull of between 18 and 25 feet, open or with a small cuddy or wind break. The cost could be small, and nets limited to three or four boxes. Another possibility is a trawler, not more than 36 to 45 feet long and operated by two or three men. It would be used primarily to catch trash fish for fertilizer or mink feeding, and would sort out marketable species if market conditions warranted.

Recently there have been developments in welding thin material—.015 to .125 inch—at high production speeds. This would be a boon to designers and builders, as the rule of thumb dictates the minimum economical thickness of welded material be .125 inch or greater. To weld thinner material, highly skilled men have been required and there was excessive burn-through and distortion due to the slow welding speeds necessitated by the thin plate.

Thinner material would allow large reductions in superstructure weight, permitting refinements of hull design. Lighter material would also be feasible in construction of small perch boats which would be too heavy if made of .125 inch steel. Builders have been reluctant to attempt smaller and lighter steel hulls. When built, the weight of the materials increased to a point where performance was unsatisfactory, or the cost of construction increased to such a degree that steel was no longer economical.

The building of small perch boats might also encourage revival of the wooden hull. Many boats could be built by fishermen themselves to save money. While some are skilled in boatbuilding, the majority are not. Therefore, hull design and construction will have to be simple. There is every possibility that the crossplanked hull of the Chesapeake Bay could be reintroduced to the Lakes.

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BOAT CATCHES

For Month of June

Hailing fares. Figure after name indicates number of trips.

SEATTLE (Halibut Fleet Fishery)

Agnes O. (1)	44,000	Lucky Star (1)	48,000
Akutan (1)	65,000		
Albatross (1)	78,000	Maddock (2)	38,000
Alaska Queen (1)	92,000	Majestic (2)	75,000
Aleutian (1)	55,000	Marconia (1)	125,000
Aleutian Queen (1)	75,000	Marilee Ann (1)	20,000
Alma (1)	44,000	Martindale (1)	62,000
Alma J. (1)	60,000	Masonic (1)	60,000
Aloma (1)	50,000	Mermaid (1)	8,000
Alrita (1)	60,000		
Angeles (1)	40,000	Nanna (2)	74,000
Anne (2)	50,500	National (1)	7,000
Antoinette L. (1)	24,000	New Washington (1)	70,000
Arne (1)	23,000	Nordic (1)	52,500
Atlantic (1)	43,000	North (1)	59,000
Attu (1)	56,000	Northern (1)	64,000
		Nova (1)	24,000
Bergen (2)	40,000		
Bering Sea (1)	83,000	Ocean Star (1)	95,000
Bernice (1)	22,000	Oceanus (2)	58,000
Bernice R. (2)	59,700	Orbit (1)	25,000
Bertha (1)	7,300	Ozzy R. (1)	31,000
Blanco (2)	59,000		
Borghild (1)	18,000	Pacific (1)	66,000
Brisk (1)	35,000	Patricia Joan (1)	67,500
Brooks Bay (1)	100,000	Phyllis Cormack (1)	50,000
		Platinum (1)	62,000
California (1)	40,500		
Carol M. (1)	43,000	Radar (2)	50,000
Carrie (1)	5,700	Radiant (1)	24,000
Chelsea (1)	50,000	Ranier (1)	13,000
Christian S. (1)	32,000	Recovery (1)	52,000
Constitution (1)	68,000	Recruit (1)	98,000
		Regina (1)	45,000
Daily (1)	42,000	Republic (1)	78,000
Dean (2)	42,000	Resolute (1)	50,000
DeLuxe (1)	20,000	Roselene (1)	45,000
Dolphin (2)	78,500		
		St. John II (1)	50,000
Eclipse (1)	58,000	Salute (1)	65,000
Ethel S. (1)	45,000	Sanak (1)	55,000
Eureka (1)	12,000	Satrania (1)	60,000
Evening Star (1)	70,000	Sea Bird (1)	54,000
		Seafarer (1)	72,500
Faith II (1)	29,000	Seagull (1)	6,000
Freya (1)	36,000	Seymour (1)	64,000
		Shirley J. (2)	56,000
Gloria II (1)	26,500	Signe (1)	40,000
Grant (1)	50,000	Sonja (2)	56,000
		Soupfin (1)	60,000
Hazel H. (1)	12,000	Summit (1)	10,000
Hoover (1)	58,000	Sunset (1)	58,000
		Susan (1)	60,000
Ideal (2)	45,500	Swift II (2)	23,000
Ikaros II (2)	33,000	Sylvia (2)	66,000
Ilene (1)	64,000		
Inez M. (1)	39,000	Tatoosh (1)	20,000
		Thor (1)	59,000
Jane (2)	73,000	Tongass (1)	55,000
Joan W. II (1)	90,000	Trinity (1)	65,000
Karen T. (1)	62,000	Vansee (1)	55,000
Kingfisher (1)	14,000	Vigorous (1)	66,000
		Vivian (1)	62,000
Lady Olga (1)	38,000		
Leading Lady (1)	72,000	Willanina (1)	9,400
Leviathan (1)	48,000		
Lindy (1)	44,000	Yakutat (1)	58,000
Lloyd (1)	31,000		
Lorelei II (1)	47,000	Zenith (1)	60,000

NEW YORK

North Cape (3)	67,100

Scallop Landings (Lbs.)

Beatrice & Ida (3)	33,000	Karina T. (3)	33,000
Carol Jack (3)	33,000	Muskegon (3)	23,600
David A. (2)	22,000	Norseman (3)	33,000
Enterprise (3)	33,000	Phyllis J. (3)	33,000
Felicia (3)	33,000		

ROCKLAND (Me.)

Angie & Florence (3)	102,500	Margaret Jean (2)	64,500
Araho (3)	365,000	Myrt II (1)	12,000
Elin B. (4)	210,500	Ocean (2)	570,000
Flo (3)	151,000	Squall (2)	590,000
Helen Mae II (2)	80,500	Storm (2)	505,000
John J. Nagle (2)	304,000	Surf (3)	850,000
Little Growler (3)	108,500	Tide (1)	290,000
Louise G. (3)	92,500	Wave (1)	280,000
Mabel Susan (4)	137,000		

Scallop Landings (Lbs.)

Pocahontas (2)	22,000

WOODS HOLE (Mass.)

Albert (5)	6,700	Little Jeff (5)	11,700
Angeline (1)	1,500	Little Lady (3)	4,200
Arnold (4)	38,400	Madeline (3)	14,100
Bernice (4)	17,300	Mary Gloria (4)	22,700
Cap'n Bill II (5)	99,200	Mildred & Myra (3)	53,100
Carole Ann (2)	19,400	Monte Carlo (1)	8,300
Clifton (2)	6,700	Morning Star (5)	23,000
Curlew (6)	32,900	Nellie M. Stanley (1)	900
Dauntless (7)	67,800	Olive M. Williams (3)	48,500
Dorothy & Mary (6)	179,300	Phyllis J. (1)	2,600
Driftwood (3)	9,200	Priscilla (2)	8,800
Elena (1)	2,100	Reliance (4)	10,100
Frankie & Jeanne (4)	19,800	Rose Marie (1)	6,200
Intrepid (4)	8,300	Shannon (4)	52,100
Judy Sue (12)	61,100	Southern Cross (1)	9,100
Kathy Dick (2)	5,000	Viking (4)	10,500
Kelbarsam (5)	72,000	Whirl (1)	300

Scallop Landings (Lbs.)

Falcon (1)	3,000

Swordfish Landings (Lbs.)

Gertrude G. (1)	1,400

PORTLAND (Me.)

Alice M. Doughty II (1)	70,000	Ocean Life (1)	305,000
Alton A. (10)	316,000	Quincy (2)	395,000
Andarte (1)	40,000	Rebecca (1)	1,700
Ariel (15)	280,200	Rebecca II (16)	304,600
Bobby & Jack (2)	225,000	Resolute (1)	50,000
Bois Bubert (10)	182,000	St. George (2)	290,000
Cathy-Aldie (8)	76,500	St. Joseph (18)	331,400
Challenger (19)	337,500	St. Joseph II (1)	31,000
Courier (1)	140,000	St. Michael (5)	27,700
Crescent (19)	472,500	Santa Lucia (3)	115,000
Dorchester (1)	190,000	Sea Hawk (2)	185,000
Dorothy & Ethel (1)	3,000	Sea Queen (3)	316,000
Dragnet (3)	148,000	Sea Rambler (2)	98,000
Gulf Stream (2)	405,000	Surfman (22)	439,800
Helen S. (10)	117,100	Theresa R. (2)	238,500
Lawrence Scola (13)	235,700	Vagabond (2)	145,000
Lawson (1)	70,000	Vagabond II (1)	70,000
Marie H. (15)	161,500	Vandal (4)	214,000
Mary & Helen (17)	224,400	Vida E. II (15)	354,000
Mary & Jennie (19)	335,600	Voyager (3)	115,000
Mascot (16)	162,300	Wawenock (2)	477,000
North Sea (2)	308,000	Winthrop (1)	175,000

Scallop Landings (Lbs.)

Sylvester F. Whalen (1)	11,000

BOSTON (Mass.)

Alphonso (2)	8,800	Minnie (2)	202,300
Annie & Lucy (3)	31,200	Mother Frances (1)	46,700
Arlington (3)	252,900		
Atlantic (2)	101,800	Nautilus (3)	145,000
		New Star (3)	288,300
Baby Rose (2)	119,300	Notre Dame (4)	158,100
Bay (3)	212,800		
Bluewaters (1)	55,100	Ohio (3)	203,300
Buzz & Billy (4)	199,600		
		Pam Ann (3)	196,000
Cambridge (2)	181,300	Patty Jean (2)	159,400
Carmela Maria (2)	25,200	Phantom (3)	371,500
Carmen & Vince (3)	80,200	Philip & Grace (2)	150,200
Charlotte M. (1)	40,900	Pilgrim (2)	112,500
Clipper (3)	85,300	Plymouth (3)	202,900
Comet (2)	115,700	Princess (6)	65,900
		Puritan (1)	58,100
Ethelena (3)	98,800		
		Racer (3)	239,500
Flying Cloud (3)	347,800	Raymonde (1)	79,100
Four (2)	120,200	Red Jacket (3)	413,500
		Regina Maria (1)	73,400
Gaetano S. (1)	78,400	Rosa B. (2)	188,300
Geraldine & Phyllis (2)	57,100	Rosie (7)	104,800
		Rush (3)	201,600
Hazel B. (1)	46,400		
Heroic (1)	92,000	St. Angelo (4)	88,500
		St. Marco (3)	117,300
Jane B. (3)	275,100	St. Rosalie (4)	163,700
J. B. Junior (3)	203,700	St. Victoria (1)	38,300
Jeanne D'Arc (4)	134,200	San Calogero (3)	39,700
Joseph & Lucia (3)	224,300	Sant' Antonio II (1)	3,500
Josephine F. (2)	13,400	Star of the Sea (3)	95,000
Josephine P. II (3)	56,800	Swallow (3)	168,600
Katie D. (1)	71,000	Terra Nova (3)	126,900
		Texas (2)	153,500
Lady of the Rosary (1)	33,700	Thomas D. (3)	99,900
Leonarda (1)	4,000	Thomas Whalen (2)	71,400
Leonard & Nancy (3)	50,400		
		Villanova (4)	108,000
Magellan (3)	74,600		
Manuel F. Roderick (3)	187,100	Weymouth (1)	54,200
Maria Del S. (5)	21,800	Wm. J. O'Brien (2)	205,200
Mary & Joan (2)	124,000	Winchester (1)	94,200
M. C. Ballard (2)	67,600	Wisconsin (2)	239,800
Medan (3)	238,400		
Michigan (2)	176,500	Yankee (7)	55,400

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For craft operating under severe conditions, such as ice, rocky waters, over oyster reefs, debris infested rivers, etc., the use of our heavy pattern wheels in NI-BRAL is a real economy. More rugged than wheels of stainless steel and more adaptable to salt or polluted waters, these propellers can save hundreds of dollars a year by eliminating haul-outs, repair jobs, down-time, etc. Write for catalog, prices and complete details. FREE expert propeller recommendations on request.

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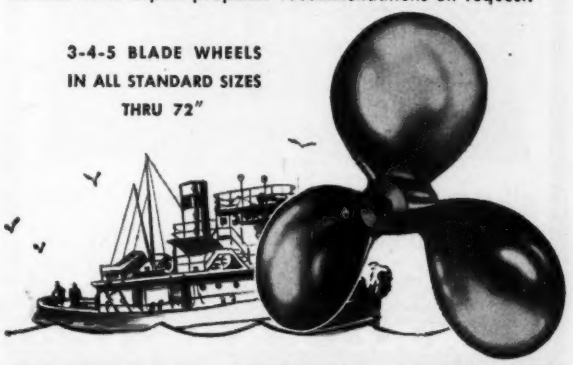
THRU 72"



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The Kaar 248 is another new voice of the sea by Kaar. It's a deluxe 55 watt, 5 channel unit with broadcast band reception. The unit itself measures only 9" by 15" by 10½" and has a separate power supply for operation off 6/12, 32 volts DC or 117 volts AC. The cabinet is finished in driftwood grey with charcoal grill and hood; chrome hood optional at extra cost. It meets government specifications for "party boats" and Canadian D.O.T. specifications. Squelch control, bulkhead or table-top mounting, and a removable hood for easy servicing are among the features.

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37B, 44 watts, 5 channels
242A, 100 watts, 6 channels
222A, 150 watts, 9 channels

Kaar ENGINEERING CORP.
2924 Middlefield Road
Palo Alto, California

All Kaar Radiotelephones are Types Accepted per FCC Regulations Effective June, 1958.

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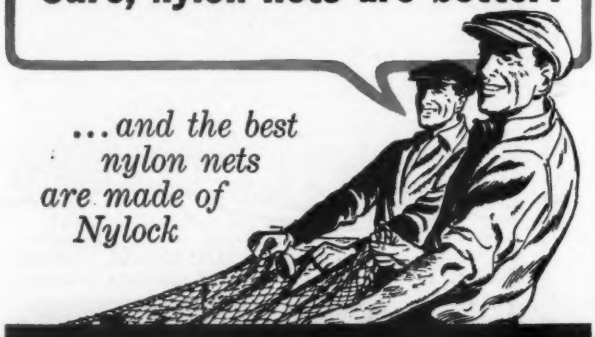

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GLOUCESTER (Mass.)

Acme (10)	117,500	Lady of the Rosary (3)	162,000
Admiral (3)	201,000	Leonard & Nancy (1)	16,000
Agatha (4)	515,000	Linda B. (5)	36,000
Agatha & Patricia (2)	270,500	Little Flower (7)	267,000
American Eagle (6)	162,000		
Andrea G. (1)	105,000	Magnolia (2)	381,500
Anna Guarino (11)	38,000	Malolo (2)	163,000
Annie (2)	5,000	Manuel P. Domingoes (2)	270,000
Anthony & Josephine (8)	190,000	Margaret Marie (2)	2,500
Atlantic (2)	128,000	Marianna II (5)	157,000
Austin W. (4)	214,500	Mary (5)	59,000
Ave Maria (7)	93,500	Mary Ann (4)	212,000
		Mary Jane (2)	415,000
Baby Rose (1)	100,000	Mary Rose (2)	265,000
Blue Waters (1)	150,000	Morning Star (5)	97,500
Bonaventure (2)	111,500		
		Nancy & Maria (9)	124,500
Cape Cod (8)	117,500	Natale III (4)	124,500
Carlo & Vince (7)	157,500	Njorth (13)	24,000
Carmela Maria (1)	5,000		
Cigar Joe (2)	117,000	Ocean Spray (2)	136,000
Clinton (12)	35,000	Olympia (7)	398,000
Curlew (2)	330,000	Our Lady of Fatima (2)	400,000
Cushmeer (1)	200,000	Our Lady of Tears (3)	12,500
Dawn (16)	42,000		
Dolphin (3)	347,000	Philip & Grace (1)	53,000
Doris F. Amero (4)	345,500	Pioneer (3)	31,000
		P. K. Hunt (2)	225,000
Eagle (2)	99,000	Prosperity (1)	2,500
Eddie & Lulu M. (2)	3,500	Puritan (1)	35,000
Edith L. Boudreau (2)	133,000		
Emily H. Brown (2)	328,000	Raymonde (1)	23,000
Estrela (2)	415,000	Regina Maria (1)	41,000
Eva II (15)	45,000	Rhode Island (5)	188,000
Evelina M. Goulart (1)	51,000	Rosalie S. (2)	26,000
		Rose & Lucy (5)	191,500
Falcon (1)	6,500	Rosemarie (5)	56,000
Famiglia (6)	70,500	Rosie & Gracie (8)	194,000
Flo (1)	165,000		
Frances R. (3)	81,500	St. Anna Maria (6)	54,500
		St. Cabrini (6)	187,500
Gaetano S. (1)	51,000	St. John (9)	33,000
Giacoma (3)	4,500	St. Joseph (4)	140,000
Gloucester (1)	180,000	St. Mary (6)	150,500
Golden Eagle (2)	160,000	St. Nicholas (2)	375,000
Grace & Salvatore (4)	523,000	St. Peter (6)	222,000
		St. Peter III (5)	168,000
Holy Family (2)	323,000	St. Providenza (12)	79,000
Holy Name (4)	117,000	St. Stephen (4)	35,000
		St. Terese (7)	192,500
Ida & Joseph (7)	468,500	St. Victoria (2)	251,000
Immaculate Conception (7)	271,500	Salvatore & Grace (5)	256,000
Irene Y. (1)	160,000	Sandra & Jean (5)	116,000
Irma Virginia (3)	5,500	Santa Maria (3)	233,000
		Sebastiana C. (6)	336,500
Jackie B. (7)	160,000	Serafina N. (4)	164,500
Jackson & Arthur (9)	31,000	Serafina II (4)	146,000
J. B. N. (3)	47,000	Sunlight (2)	325,000
Jennie & Lucia (5)	281,000	Theresa M. Boudreau (2)	395,000
Joseph S. Mattos (1)	190,000	Tina B. (1)	65,000
Josephine P. II (1)	4,000	Tipsy Parson (1)	2,000
Josie II (4)	20,000		
Judith Lee Rose (1)	260,000	Villanova (2)	470,000
		Vincie N. (4)	113,000
Kingfisher (3)	625,000	Virginia Ann (7)	120,500
Lady of Good Voyage (1)	40,000	Wild Duck (2)	304,000

Scallop Landings (Lbs.)

Frances L. MacPherson (1) 11,000

NEW BEDFORD (Mass.)

Adventurer (3)	46,200	Marie & Katherine (3)	68,500
Althea (2)	39,500	Martha E. Murley (1)	24,000
Anastasia E. (2)	45,800	Mary E. D'Eon (3)	55,800
Annie Louise (3)	29,500	Mary J. Landry (3)	93,200
Annie M. Jackson (4)	112,500	Mary Tapper (3)	80,000
		Midway (3)	112,100
Barbara M. (4)	100,000	Miriam A. (2)	69,300
		Molly & Jane (4)	84,900
Cap'n Bill II (3)	98,500		
Capt. Deebold (3)	70,900	Nancy L. (3)	46,900
Carl Henry (2)	49,800	North Sea (3)	79,500
Catherine & Mary (2)	48,800		
Charles E. Beckman (4)	59,100	Pauline H. (2)	174,500
Comber (2)	32,300	Phyllis J. (2)	20,600
Christina J. (4)	140,000		
		Richard Lance (1)	33,200
Falcon (3)	97,000	Roann (2)	38,500
Friendship (3)	88,800	Roberta Anne (3)	92,600
		Robert Joseph (3)	89,100
Gannet (3)	120,400	Rush (3)	102,800
Growler (3)	95,100	Ruth & Nancy (1)	3,500
		Sea Gold (3)	76,900
Harmony (4)	93,800	Shannon (1)	6,500
Hope II (2)	63,000	Sharon Louise (4)	94,800
		Smilyn (1)	25,000
Invader (3)	120,000	Solveig J. (3)	155,100
		Stanley B. Butler (3)	178,300
Janet & Jean (3)	87,400	Sunbeam (3)	86,100
Joan & Ursula (1)	31,200	Susie O. Carver (5)	64,400
John G. Murley (3)	186,200		
Julia DaCruz (3)	72,700	Theresa & Jean (3)	151,200
		Trina Lea (1)	5,600
Katie D. (1)	57,800	Two Brothers (4)	37,600
Laura A. II (4)	157,000	Valiant Lady (2)	57,000
Libby (3)	100,900	Venture I (3)	97,300
Lorine III (3)	70,900	Viking (3)	126,500
Louis A. Thebaud (3)	87,500		
		Whaler (2)	73,600
Major J. Casey (3)	103,700		
Malvina B. (2)	30,500		

NEW BEDFORD Scallop Landings (Lbs.)

Abram H. (2)	24,200	Laura A. (2)	22,400
Adele K. (3)	33,600	Lauren Fay (3)	33,600
Aloha (3)	33,600	Lillian B. (3)	33,600
Alpar (2)	22,400	Linda & Warren (2)	19,500
Amelia (3)	33,600	Linus S. Eldridge (3)	34,600
		Little Infant (2)	14,500
Babe Sears (2)	22,400	Louise (3)	36,600
Baltic (3)	26,600	Lubenray (2)	22,400
Barbara (2)	15,000		
Barbara & Gail (3)	33,600	Malene & Marie (3)	33,600
B. Estelle Burke (2)	26,700	Mary Ann (3)	33,000
Bobby & Harvy (3)	34,200	Mary J. Hayes (3)	34,400
Brant (3)	34,000	Moonlight (3)	34,400
Bright Star (3)	33,600		
		Nancy Jane (3)	33,600
Camden (2)	23,400	New Bedford (3)	34,000
Carol & Estelle (2)	22,400	Newfoundland (2)	22,800
Catherine B. (2)	22,400	Noreen (1)	15,500
Catherine C. (4)	44,800		
Charles S. Ashley (4)	45,100	Pearl Harbor (3)	35,400
Clipper (3)	34,000	Pelican (3)	43,800
C. R. & M. (1)	9,000	Polaris (3)	34,000
		Porpoise (3)	27,400
Dartmouth (2)	24,200		
Debbie Jo-Ann (3)	33,600	Richard Lance (1)	11,000
		Ruth Lea (2)	22,400
Edgartown (3)	35,600	Ruth Moses (3)	33,600
Eleanor & Elsie (2)	22,400		
Elizabeth N. (2)	22,400	Sandra Jane (3)	34,600
		Sea Ranger (2)	23,200
Fairhaven (3)	33,600	Sippican (4)	45,700
Flamingo (2)	22,400	Snoopy (3)	35,600
Fleetwing (2)	22,400	Stanley M. Fisher (3)	33,600
Florence & Lee (3)	36,600	Stephen R. (2)	25,000
Florence B. (3)	33,600		
		Ursula M. Norton (3)	34,300
Geraldine (3)	35,600		
		Villa-Riall (2)	22,400
Hilda Garston (3)	36,600	Vivian Fay (3)	33,600
Jerry & Jimmy (2)	25,200	Wamsutta (2)	22,700
Josephine & Mary (3)	34,400	Whaling City (2)	23,400
Kingfisher (3)	34,000		

Human Failure and Boat Losses

(*Continued from page 7*)

used to keep tanks full, were not utilized. It was believed that the electric bilge alarm was not turned on.

Six years before the loss, while undergoing shipyard service, the electrical circuit to the pilot house wheelstand had been cut. The safety appliance in the system was, therefore, not operative. No counter-acting rudder-force could be applied.

During the previous six years, when manual steering was required, the engineer had broken the contacts at the steering motor by using a screwdriver. The turn which caused the loss resulted from corrosion in the contacts, causing the motor to put the helm hard over.

Losses at sea must be analyzed in the light of immediate or recent sea and weather conditions. Where heavy seas may be ruled out, the causes can be compared with those of vessels which sink in port. Some of these causes are deteriorated hull fittings, valves, pipes, etc., due to lack of maintenance or the owner's desire to extend equipment life beyond reasonable limits.

Another type accident has its beginning in some small fire, easily quenched with a small portable hand extinguisher, if the man on watch is there when it starts. In the history of accidents resulting in total loss from fire in the southern California clipper fleet, it is common to find that the blaze was not detected until it could not be fought with the equipment available.

The seagoing personnel in the fishing industry must be afforded the best available materials to work with, and they must be taught the physical endurance limits of these products. Training programs must be established to give them the knowledge and experience to prevent accidents. Training under qualified instructors is recommended in, principles of seamanship, safety aboard ship, lifesaving at sea, fire fighting on shipboard, and damage control.

There should be respect for the advice of technical men ashore, planned and punctually executed maintenance programs, and planned and properly executed operations of boats and equipment.

The task of fishing boat designers, builders, and maintenance technicians is not easy by any standard. Difficulties in building a vessel which is worthy of the sea in all respects, and will make a profit in fishing, seem at times insurmountable. But they are trivial in comparison to the difficulties of introducing reforms, which seek to eliminate the loss of life, boats, and equipment due to human failure.

B.F.Goodrich

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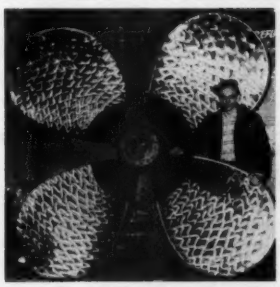

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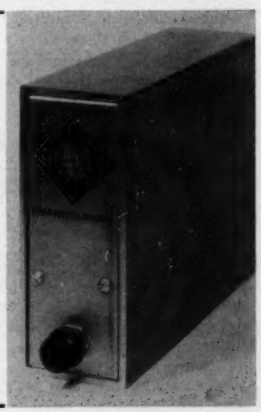

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Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.
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Burmeister & Wain American Corp., Lathrop Engine Div., Mystic, Conn.
Caterpillar Tractor Co., Peoria, Ill.
Cummins Engine Co., Columbus, Ind.
Detroit Diesel Engine Div., General Motors Corp., 13400 W. Outer Drive, Detroit 28, Mich.
Enterprise Engine & Machinery Co., 18th and Florida Sts., San Francisco 10, Calif.
Fairbanks, Morse & Co., Chicago, Ill.
Ford Marined Engines, Osco Motors Corp., 3627 N. Lawrence St., Philadelphia 40-AF, Pa.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Hercules Motors Corp., 101 Eleventh St., S.E., Canton, Ohio
Hubbs Engine Co., 1168 Commonwealth Ave., Boston 34, Mass.
Lister-Blackstone, Inc., 42-32 21st St., Long Island City 1, N. Y.
H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.
Perkins Machinery Co. Inc., Exit 53 Route 128, Needham Hts., Mass.; 4 Water St., Fairhaven, Mass.
Petter Engine Div., Orenda Industrial, Inc., 34-14 58th St., Woodside 77, N. Y.
Red Wing Marine Corp., Red Wing, Minn.
Waukesha Motor Co., Waukesha, Wisc.
White Diesel Engine Division, White Motor Co., Springfield, Ohio.

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Marine Engine Division, Chrysler Corp., 12200 E. Jefferson Ave., Detroit 15, Mich.
Ford Marined Engines, 3627 N. Lawrence St., Philadelphia 40-AF, Penna.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Norseman Marine, 105 Nevada St., Oshkosh, Wisc.
Red Wing Marine Corp., Red Wing, Minn.

ENGINES—Outboard
Evinrude Motors, 4670 N. 27 St., Milwaukee 16, Wis.
Johnson Motors, 6300 Pershing Rd., Waukegan, Ill.

FISH KNIVES
R. Murphy Co., Ayer, Mass.

FISHING GEAR
The Harris Co., Portland, Me.
Marine Construction & Design Co., 2300 Commodore Way, Seattle 99, Wash.
Westerbeke Fishing Gear Co., Inc., Fish Pier Road, Boston 10, Mass.

FLARE SIGNALS
Kilgore Inc., International Flare Signal Div., Westerville, Ohio

FLEXIBLE HOSE LINES
Aeroquip Corp., 300 South East Ave., Jackson, Mich.

FLOATS
Dale Plastics Corp., 5736 12th St., Detroit 8, Mich.
J. H. Shepherd Son & Co., Elyria, Ohio.
B. F. Goodrich Sponge Products Division, Shelton, Conn.
The Linen Thread Co., Inc., Blue Mountain, Ala.

GENERATING SETS
Allis-Chalmers, Buda Division, 1135 S. 70th St., Milwaukee 1, Wisc.
Winpower Mfg. Co., Newton, Iowa

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Safety Industries, Inc., Box 904, New Haven 4, Conn.
Winpower Mfg. Co., Newton, Iowa

HOOKS
O. Mustad & Son, Oslo, Norway.
"Pflueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio.

INSULATION
"Styrofoam" (Expanded Dow Polysytrene): The Dow Chemical Co., Midland, Mich.

LIFE RAFTS
"Seafarer": Capt. A. J. Pedersen, 78 Woodmont St., Portland, Me.

LORAN
Edo Corporation, College Point, L. I., N. Y.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

MOTOR GENERATORS
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NETS
W. A. Augur, Inc., 54 Beekman St., New York 38, N. Y.
The Fish Net & Twine Co., Menominee, Mich.
Hope Fish Netting Mills, Inc., Hope, R. I.
The Linen Thread Co., Inc., Blue Mountain, Ala.
Moodus Net & Twine, Inc., Moodus, Conn.
Marlon, 1453 West 123rd St., Los Angeles 47, Calif.
Joseph F. Shea, Inc., East Haddam, Conn.
A. M. Starr Net Co., 10 Summit Street, East Hampton, Conn.
Western Trawl & Supply Co., Freeport, Texas.

OIL—Lubricating
The California Oil Co., Perth Amboy, N. J.
Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.
Socony Mobil Oil Co., Inc., Marine Sales Dept., 26 Broadway, New York 4, N. Y.
Standard Oil Co. of California, Standard Oil Bldg., San Francisco, Calif.

PAINTS
The Federal Paint Co., Inc., 33 Rector St., New York 6, N. Y.
Glass Plastics Corp., 1605 W. Elizabeth Ave., Linden, N. J.
Henderson & Johnson, Inc., Gloucester, Mass.
International Paint Co., Inc., 21 West St., New York, N. Y.
Pettit Paint Co., Belleville, N. J.
Tarr & Wonson Ltd., Gloucester, Mass.
C. A. Woolsey Paint & Color Co. Inc., 205 East 42nd St., New York 17, N. Y.

PRESERVATIVES
Robeson Preservo Co., 214 Merchant St., Port Huron, Mich.

PROPELLERS
Columbian Bronze Corp., Freeport, N. Y.
Federal Propellers, Grand Rapids, Mich.
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.
Michigan Wheel Co., 1501 Buchanan Avenue, S. W., Grand Rapids, Mich.

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Haskell & Hall, Inc., 36 Webb St., Salem, Mass.

PROPELLER SHAFTS
The American Brass Co., Waterbury 20, Conn.
The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

PUMPS
Brodeur Machine Co., Inc., Pump Div., 62 Wood St., New Bedford, Mass.
Jabsco Pump Co., 2031 N. Lincoln St., Burbank, Calif.
Sudbury Laboratory, South Sudbury, Mass.

RADAR
Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.
Decca Radar Inc., 539 West 25th St., New York 1, N. Y.
Edo Corporation, College Point, L. I. N. Y.
Lavoie Laboratories, Inc., Morganville 16, N. J.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

RADIO MONITORS
Sesco, Inc., 47 Nichols Ave., Friday Harbor, Wash.

RADIO TELEPHONES
Applied Electronics Co., Inc., 213 E. Grand Ave., South San Francisco, Calif.
Bludworth Marine, 1500 Main Ave., Clifton, N. J.
Hudson American—Div. of Vocaline Company of America, Inc., Old Saybrook, Conn.
Kaar Engineering Corp., 2915 Middlefield Rd., Palo Alto, Calif.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

RANGES—Galley
"Shipmate"—Shipmate Stove Division, Souderton, Pa.
"Shipmate" and "Webbperfection" — Elisha Webb & Son Co., 136 S. Front St., Philadelphia 6, Pa.
Harry C. Welskittel Co., Inc., 4901 Pulaski Highway, Baltimore 24, Md.

REDUCTION GEARS
Auto Engine Works, Inc., 333(A) North Hamline Ave., St. Paul 4, Minn.
Paragon Gear Works, Inc., 628 Cushman St., Taunton, Mass.
Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn.
Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.
The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.

RUST PREVENTIVES
Sudbury Laboratory, South Sudbury, Mass.

SEARCHLIGHTS
The Carlisle & Finch Co., 4562 W. Mitchell Ave., Cincinnati 32, Ohio

SHIPBUILDERS
Anderson Boat Works, Thomaston, Me.
Blount Marine Corp., Warren, Rhode Island.
Diesel Engine Sales Inc., St. Augustine, Fla.
Harvey F. Gamage, So. Bristol, Maine.
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.
Lash Brothers Boat Yard, Friendship, Me.
Newbert & Wallace, Thomaston, Me.
Frank L. Sample & Son, Inc., Boothbay Harbor, Me.
Story Marine Railway, 257 Front St., So. Portland, Me.

STARTING FLUID
Spray Products Corp., P. O. Box 844, Camden 1, N. J.

STERN BEARINGS
Byron Jackson Tools, Inc. 1900 E. 65th St., Los Angeles 1, Calif.
"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

TWINE
Brownell & Co., Inc., Moodus, Conn.
Columbian Rope Co., Auburn, N. Y.
Andrew Crowe & Sons, Inc., Tiogue Ave., Coventry, R. I.
Ross-Matthews Corp., Box 1110, Fall River, Mass.

VOLTAGE REGULATORS
Safety Industries, Inc., Box 904, New Haven 4, Conn.

WINCHES
Hancock Marine, 1567 No. Main St., Fall River, Mass.
Hathaway Machinery Co., Inc., New Bedford, Mass.
Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

WIRE ROPE
American Steel & Wire Division, United States Steel, Rockefeller Bldg., 614 Superior Ave., Cleveland 13, Ohio.
Hackensack Cable Corp., 110 Orchard St., Hackensack, N. J.
John A. Roebling's Sons Corp., Trenton 2, N. J.
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

FOREIGN BAILINGS

NORTHWEST ATLANTIC GROUNDS may be exploited by still more countries. The Polish fishing industry, which has been expanding rapidly during recent years, expects to enlarge its activities to the northwest Atlantic area during the summer.

Due to this planned extension, Poland has become interested in the International Commission for the Northwest Atlantic Fisheries. An observer attended the 1959 annual meeting.

Belgium is looking for new fishing grounds since the extension of Icelands territorial waters. A Belgian fishing firm recently sent two trawlers to test the grounds off Labrador.

Brazil has acquired three large trawlers intended for fishing on banks off the United States and Canada. A special port has been established to handle the catches of these vessels. This is a new venture for Brazil, which has imported its salt cod in the past.

NEW FISHING GROUNDS of a reportedly rich nature have been discovered by the Soviets off western Greenland in the Davis Strait. The exploratory fishing vessel, *Muksum*, found that a 400-mile strip extending from Cape Farewell to Disko Island abounds in cod, golden ocean perch, and other fish.

FISHERMEN ARE INSURED on ling catches in Sweden. The Swedish High Sea Fishermen's Sales Association in Goteborg has decided to arrange for insurance on ling catches for its members.

For example, the fisherman would be paid, in the event of an engine breakdown, a certain compensation for the catch he would normally have made.

Vessels holding such policies will be reimbursed for oil, ice bait, and salt expenditures and also for loss of income (up to the equivalent of US $3,866).

FOOD PRESERVATION STUDIES of treatment with ionizing radiations have shown impressive progress in Europe, according to a Food and Agriculture Organization (UN) report. The tests have been laboratory use of radiations in extending the storage life of foods and killing undesirable organisms.

Treatment with moderate doses has produced a five fold increase in the storage life of fish, as well as meat and vegetable products. The irradiation process works without appreciably raising the temperature and thereby cooking the foods.

Treatment with higher doses, intended to give steril food in which no microbial spoilage is possible, produces changes in color, flavor, odor, and texture which are considered objectionable.

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